## SEQUENCE LISTING

- <110> Agarwal, Pankaj Lee, Judithann M. Smith, Randall F. White, John R.
- <120> NOVEL COMPOUNDS
- <130> GP50029-1
- <140> TO BE ASSIGNED
- <141> 2003-09-12
- <150> 60/213,161
- <151> 2000-06-22
- <150> 60/213,156
- <151> 2000-06-22
- <150> PCT/US01/19929
- <151> 2001-06-22
- <150> 10/312,088
- <151> 2002-12-20
- <160> 46
- <170> FastSEQ for Windows Version 4.0
- <210> 1
  - <211> 1383
  - <212> DNA
  - <213> Homo sapiens
  - <400> 1
  - atgcttggaa tttggattgt tgcattcttg ttctttggca catcaagagg aaaagaagtt 60

```
tgctatgaaa ggttagggtg tttcaaagat ggtttaccat ggaccaggac tttctcaaca 120
gagttggtag gtttaccctg gtctccagag aagataaaca ctcgtttcct gctctacact 180
atacacaatc ccaatgeeta teaggagate agtgeggtta attetteaac tatecaagee 240
tcatattttg gaacagacaa gatcacccgt atcaacatag ctggatggaa aacagatggc 300
aaatggcaga gagacatgtg caatgtgttg ctacagctgg aagatataaa ttgcattaat 360
ttagattgga tcaacggttc acgggaatac atccatgctg taaacaatct ccgtgttgtt 420
ggtgctgagg tggcttattt tattgatgtt ctcatgaaaa aatttgaata ttccccttct 480
aaagtgcact tgattggcca cagcttggga gcacacctgg ctggggaagc tgggtcaagg 540
ataccaggee ttggaagaat aactgggttg gacccagetg ggccattttt ccacaacact 600
ccaaaggaag tcaggctaga cccctcggat gccaactttg ttgacgttat tcatacaaat 660
gcagctcgca tcctctttga gcttggtgtt ggaaccattg atgcttgtgg tcatcttgac 720
ttttacccaa atggagggaa gcacatgcca ggatgtgaag acttaattac acctttactg 780
aaatttaact tcaatgctta caaaaaagaa atggcttcct tctttgactg taaccatgcc 840
cgaagttatc aattttatgc tgaaagcatt cttaatcctg atgcatttat tgcttatcct 900
tgtagateet acacatettt taaageaggt acatgtgtag gatgtgeaga tttgttacat 960
aggatagata agataggaag tcatacttcc catgtgtttt taaccettte tetecettte 1020
cttcttgttt ccttatatct aggttggagg cacaaattgt ctgttaaact cagtggaagc 1080
gaagtcactc aaggaactgt ctttcttcgt gtaggcgggg cagttaggaa aactggggag 1140
tttgccattg tcagtggaaa acttgagcca ggcatgactt acacaaaatt aatcgatgca 1200
gatgttaacg ttggaaacat tacaagtgtt cagttcatct ggaaaaaaca tttgtttgaa 1260
gattctcaga ataagttggg agcagaaatg gtgataaata catctgggaa atatggatat 1320
aaatctacct totgtagoca agacattatg ggacotaata ttotocagaa cotgaaacca 1380
                                                                  1383
tgc
```

<210> 2 <211> 927 <212> DNA

<213> Homo sapiens

```
atgccgttcc tgcagctgaa agggagagaa acacctccat cctggagaca cgatagccgc 60 tcacttgttc acctgctgaa cggcaaggag ggcgtgtggg acaccacggg ctatgcctta 120 gggagcagag aatcattgaa tcctgacatg gggattggtg acccacatgg acacagcact 180 gtccacacca gggaagcagg cactgcctgt ccattacagc ttctaggtgc tcgggaggcc 240 agtctgctgg cctgtgggat ctgccaggcc tctggacaaa tcttcatcac ccaaaccctg 300 gggatcaagg gatatcggac tgtcgtggcc ctggataagg tccctgagga tgttcaggaa 360 tacagctggt actggggtgc aaacgacagc gcaggaaaca tgattatcag ccacaaaccg 420 cccagtgcc agcagcctgg gcccatgtac actggcagga agagagtgaa cagagaaggc 480 gcaggcaatg agacccaaag agcaaccggc tggctggagg ttctagatgg gcccgactat 600
```

```
gtgctgctga ggagcaatcc tgatgatttc aacggcattg tgacagctga gatcggctcc 660 caagtggaaa tggagtgtat ctgctattcc ttcctggatc tcaagtacca ctggatccac 720 aatggctccc tcctgaactt ctcagatgca aagatgaacc tctcgagtct tgcctgggag 780 cagatgggcc gttaccgatg cactgtggag aaccccgtga cacagctgat catgtacatg 840 gacgtcagga tccaggccc ccatgagtgc agcagctcc ctccaggctc atgcttgca 900 catctccctg cctccatgcc ctgctag 927

<210> 3

<211> 1374

<212> DNA

<213> Homo sapiens

<400> 3
atggaccttt ccagacccag atggagcctg tggaggaggg tcttcctcat ggccagtctg 60 ctggagctgtg ggaggagggg tcttcctcat ggccagtctg 60 ctggagctgtg ggaggagggg tcttcctcat ggccagtctg 60 ctggagctgtg ggaggagggg tcttcctcat ggccagtctg 120
```

# <400> 3 atggacettt ccagacccag atggagectg tggaggaggg tettecteat ggecagtetg 60 ctggcctgtg ggatctgcca ggcctctggc caaatcttca tcacccaaac cctggggatc 120 aagggatate ggactgtegt ggeeetggat aaggteeetg aggatgttea ggaataeage 180 tggtactggg gtgcaaacga cagcgcagga aacatgatta tcagccacaa accgcccagt 240 gcccagcage ctgggcccat gtacactggc agggagagag tgaacagaga aggcagcctg 300 ttgatcaggc cgactgcatt aaatgacacg ggaaactaca ctgttcgggt ggttgcaggc 360 aatgagacce aaagagcaac cggctggctg gaggttctag agttgggaag caatctgggc 420 atctccgtca atgccagctc cctggtggag aacatggatt ctgtggctgc tgactgcctc 480 acaaatgtca ccaacatcac gtggtatgtg aatgatgtgc ctacctctag tagtgaccgg 540 atgacaattt ccccagacgg caagaccete gteateetea gggteageeg etatgacaga 600 acaattcagt gcatgataga gagtttccca gagatctttc agagaagtga acgcatctct 660 ctgactgtgg cctatgggcc cgactatgtg ctgctgagga gcaatcctga tgatttcaac 720 ggcattgtga cagctgagat cggctcccaa gtggaaatgg agtgtatctg ctattccttc 780 ctggatetea agtaceactg gatecacaat ggeteeetee tgaacttete agatgeaaag 840 atgaacctct cgagtcttgc ctgggagcag atgggccgtt accgatgcac tgtggagaac 900 cccgtgacac agctgatcat gtacatggac gtcaggatcc aggcccccca tgagtgtcct 960 etteetteag ggatettace tgttgteeae agagatttet eeateteagg ateeatggtg 1020 atgttcctca tcatgctgac agtgctgggt ggcgtttaca tctgtggagt cctgatccat 1080 gctctgatca accactactc aatcaggtgc cctcattgct ctgggacaag ggtgggatgt 1140 tggctggggg ctgggactca ggagccagcc ctccctccag aggggaagca gagccagaag 1200

gggagggata agccaggaac taggttgtca gggatcatct ggggcagaca gatcagcccc 1260 caggacctga agctgatggg agcaagagag ggtttagagt cggccatggt tctaaatagc 1320

1374

tgtggggttt cttctagcaa cttcccttct ctttgtgttt ataagggata ttaa

<210> 4 <211> 2115 <212> DNA

(400) 4						
atgctccatg	atgggttgac	tgcacctgat	gggtgtggaa	tctacagcct	gaccgggcgg	60
gaagtcctga	cgcccttccc	aggattgggc	actgcggcag	ccccggcaca	gggcggggcc	120
cacctgaagc	agtgtgacct	gctgaagctg	tcccggcggc	agaagcagct	ctgccggagg	180
gagcccggcc	tggctgagac	cctgagggat	gctgcgcacc	teggeetget	tgagtgccag	240
tttcagttcc	ggcatgagcg	ctggaactgt	agcctggagg	gcaggatggg	cctgctcaag	300
agaggcttca	aagagacagc	tttcctgtac	gcggtgtcct	ctgccgccct	cacccacacc	360
ctggcccggg	cctgcagcgc	tgggcgcatg	gagcgctgca	cctgtgatga	ctctccgggg	420
ctggagagcc	ggcaggcctg	gcagtggggc	gtgtgcggtg	acaacctcaa	gtacagcacc	480
aagtttctga	gcaacttcct	ggggtccaag	agaggaaaca	aggacctgcg	ggcacgggca	540
gacgcccaca	atacccacgt	gggcatcaag	gctgtgaaga	gtggcctcag	gaccacgtgt	600
aagtgccatg	gcgtatcagg	ctcctgtgcc	gtgcgcacct	gctggaagca	gctctccccg	660
ttccgtgaga	cgggccaggt	gctgaaactg	cgctatgact	cggctgtcaa	ggtgtccagt	720
gccaccaatg	aggccttggg	ccgcctagag	ctgtgggccc	ctgccaggca	gggcagcctc	780
accaaaggcc	tggccccaag	gtctggggac	ctggtgtaca	tggaggactc	acccagcttc	840
tgccggccca	gcaagtactc	acctggcaca	gcaggtaggg	tgtgctcccg	ggaggccagc	900
tgcagcagcc	tgtgctgcgg	gcggggctat	gacacccaga	gccgcctggt	ggccttctcc	960
tgccactgcc	aggtgcagtg	gtgctgctac	gtggagtgcc	agcaatgtgt	gcaggaggag	1020
cttgtgtaca	cctgcaagca	ctagatgggc	cctgtggggt	tcccgaggca	gtgccaggga	1080
gccttctttg	agagcagccc	tgggcagacc	agggcccgcc	tgaccgggcg	ggaagtcctg	1140
acgcccttcc	caggattggg	cactgcggca	gccccggcac	agggcggggc	ccacctgaag	1200
cagtgtgacc	tgctgaagct	gtcccggcgg	cagaagcagc	tctgccggag	ggagcccggc	1260
ctggctgaga	ccctgaggga	tgctgcgcac	ctcggcctgc	ttgagtgcca	gtttcagttc	1320
cggcatgagc	gctggaactg	tagcctggag	ggcaggatgg	gcctgctcaa	gagaggcttc	1380
aaagagacag	ctttcctgta	cgcggtgtcc	tctgccgccc	tcacccacac	cctggcccgg	1440
gcctgcagcg	ctgggcgcat	ggagcgctgc	acctgtgatg	actctccggg	gctggagagc	1500
cggcaggcct	ggcagtgggg	cgtgtgcggt	gacaacctca	agtacagcac	caagtttctg	1560
agcaacttcc	tggggtccaa	gagaggaaac	aaggacctgc	gggcacgggc	agacgcccac	1620
aatacccacg	tgggcatcaa	ggctgtgaag	agtggcctca	ggaccacgtg	taagtgccat	1680
ggcgtatcag	gctcctgtgc	cgtgcgcacc	tgctggaagc	agctctcccc	gttccgtgag	1740
acgggccagg	tgctgaaact	gcgctatgac	tcggctgtca	aggtgtccag	tgccaccaat	1800
gaggccttgg	gccgcctaga	gctgtgggcc	cctgccaggc	agggcagcct	caccaaaggc	1860
ctggccccaa	ggtctgggga	cctggtgtac	atggaggact	cacccagctt	ctgccggccc	1920
					ctgcagcagc	
					ctgccactgc	
caggtgcagt	ggtgctgcta	cgtggagtgc	cagcaatgtg	tgcaggagga	gcttgtgtac	
acctgcaagc	actag .					2115

```
<210> 5
<211> 1086
<212> DNA
<213> Homo sapiens
<400> 5
atgaageeee tgaggaggee cettecette atttgeeeet caccaccate eecaaggete 60
acctgtetee etectetege tetetetage etgaceggge gggaagteet gaegeeette 120
ccaggattgg gcactgcggc agccccggca cagggcgggg cccacctgaa gcagtgtgac 180
ctgctgaagc tgtcccggcg gcagaagcag ctctgccgga gggagcccgg cctggctgag 240
accetgaggg atgetgegea ecteggeetg ettgagtgee agttteagtt eeggeatgag 300
cgctggaact gtagcctgga gggcaggatg ggcctgctca agagaggctt caaagagaca 360
gettteetgt aegeggtgte etetgeegee eteaceeaca eeetggeeeg ggeetgeage 420
getgggegea tggagegetg caeetgtgat gaeteteegg ggetggagag eeggeaggee 480
tggcagtggg gcgtgtgcgg tgacaacctc aagtacagca ccaagtttct gagcaacttc 540
ctggggtcca agagaggaaa caaggacctg cgggcacggg cagacgccca caatacccac 600
gtgggcatca aggctgtgaa gagtggcctc aggaccacgt gtaagtgcca tggcgtatca 660
ggeteetgtg eegtgegeae etgetggaag eageteteee egtteegtga gaegggeeag 720
gtgctgaaac tgcgctatga ctcggctgtc aaggtgtcca gtgccaccaa tgaggccttg 780
ggccgcctag agctgtgggc ccctgccagg cagggcagcc tcaccaaagg cctggcccca 840
aggtetgggg acetggtgta catggaggae teacecaget tetgeeggee cageaagtae 900
teacetggea eageaggtag ggtgtgetee egggaggeea getgeageag eetgtgetge 960
gggcggggct atgacaccca gagccgcctg gtggccttct cctgccactg ccaggtgcag 1020
tggtgctgct acgtggagtg ccagcaatgt gtgcaggagg agcttgtgta cacctgcaag 1080
cactag
                                                                  1086
<210> 6
<211> 1098
<212> DNA
<213> Homo sapiens
<400> 6
atgtggctgc ttttaacaac aacttgtttg atctgtggaa ctttaaatgc tggtggattc 60
cttgatttgg aaaatgaagt gaatcctgag gtgtggatga atactagtga aatcatcatc 120
tacaatggct accccagtga agagtatgaa gtcaccactg aagatgggta tatactcctt 180
gtcaacagaa ttccttatgg gcgaacacat gctaggagca cagcagatgc aggttatgat 240
gtatggatgg gaaacagtcg gggaaacact tggtcaagaa gacacaaaac actctcagag 300
acagatgaga aattetggge etttagtttt gatgaaatgg eeaaatatga teteecagga 360
gtaatagact tcattgtaaa taaaactggt caggagaaat tgtatttcat tggacattca 420
cttggcacta caatagggtt tgtagccttt tccaccatgc ctgaactggc acaaagaatc 480
```

aaaatgaatt ttgccttggg tcctacgatc tcattcaaat atcccacggg catttttacc 540 aggttttttc tacttcaaa ttccataatc aaggctgttt ttggtaccaa aggtttctt 600 ttagaagata agaaaacgaa gatagcttct accaaaatct gcaacaataa gatactctgg 660 ttgatatgt gcgaatttat gtccttatgg gctggatcca acaagaaaaa tatgaatcag 720 agtcgaatgg atgtgtatat gtcacatgct cccactggtt catcagtaca caacattctg 780 cataataaaac agctttacca ctctgatgaa ttcagagctt atgactgggg aaatgacgct 840 gataatatga aacattacaa tcagagtcat ccccctatat atgacctgac tgccatgaaa 900 gtgcctactg ctattgggc tggtggacat gatgtcctcg taacacccca ggatgtggcc 960 aggatactcc ctcaaatcaa gagtcttcat tactttaagc tattgccaga ttggaaccac 1020 tttgatttt tctgggcct cgatgcccc caacggatgt acagtgaaat catagcttta 1080 atgaaggcat attcctaa

<210> 7

<211> 1194

<212> DNA

<213> Homo sapiens

#### <400> 7

atgtggcage ttttagcage ageatgetgg atgettette ttggatetat gtatggttat 60 gacaagaaag gaaacaatgc aaaccctgaa gctaatatga atattagcca gattatttct 120 tactggggtt atccttatga agagtatgat gttacaacaa aagatggtta tatccttgga 180 atttatagga ttccacatgg aagaggatgc ccagggagga cagctccaaa gcctgctgtg 240 tatttgcage atggettaat tgcatetgee agtaactgga tttgcaacet geecaacaae 300 agtttggctt teettetgge agatagtggt tatgaegtgt ggttggggaa eageegagga 360 aacacttggt ccagaaaaca cettaaattg tcaccgaaat caccggaata ctgggcette 420 agtttggatg agatggctaa atatgacctt ccagccacaa tcaattttat catagagaaa 480 actggacaga agcgactcta ctacgtgggc cactcacaag gcaccaccat agcttttata 540 gcattttcta caaacccaga actggctaaa aagattaaga tattttttgc actggctcca 600 gttgtcacag ttaaatacac ccaaagtcct atgaaaaaac taacaaccct ttccaggcga 660 gtagttaagg tgttgtttgg tgacaaaatg ttccaccctc atacattgtt tgaccaattc 720 attgccacca aagtgtgcaa tcgaaagcta ttccgtcgta tttgcagcaa cttcctattt 780 actetgagtg gatttgatee geaaaaetta aatatgagte gettggatgt ttatttgtea 840 cacaatcctg cgggaacatc tgttcagaat atgctgcact gggctcagct ttaccactct 900 gatgaattca gagcttatga ctggggaaat gacgctgata atatgaaaca ttacaatcag 960 agtcatcccc ctatatatga cctgactgcc atgaaagtgc ctactgctat ttgggctggt 1020 ggacatgatg tectegtaac acceeaggat gtggeeagga tacteeetca aateaagagt 1080 cttcattact ttaagctatt gccagattgg aaccactttg attttgtctg gggcctcgat 1140 gcccctcaac ggatgtacag tgaaatcata gctttaatga aggcatattc ctaa 1194 <211> 11118 <212> DNA <213> Homo sapiens

#### <400> 8

atggcgaage ggctctgcge ggggagegea etgtgtgtte geggeeeeeg gggeeeegeg 60 ccgctgctgc tggtcgggct ggcgctgctg ggcgcggcgc gggcgcggga ggaggcgggc 120 ggcggcttca gcctgcaccc gccctacttc aacctggccg agggcgcccg catcgccgcc 180 teegegaeet geggagagga ggeeeeggeg egeggeteee egegeeeeae egaggaeett 240 tactgcaage tggtaggggg eccegtggee ggeggegace ceaaceagae cateegggge 300 cagtactgtg acatetgeae ggetgeeaae ageaacaagg cacaeeeege gageaatgee 360 atcgatggca cggagcgctg gtggcagagt ccaccgctgt cccgcggcct ggagtacaac 420 gaggtcaacg tcaccctgga cctgggccag gtcttccacg tggcctacgt cctcatcaag 480 tttgccaact caccecggee ggacetetgg gtgetggage ggtecatgga etteggeege 540 acctaccage cetggeagtt etttgeetee teeaagaggg actgtetgga geggtteggg 600 ccacagacgc tggagcgcat cacacgggac gacgcggcca tctgcaccac cgagtactca 660 cgcatcgtgc ccctggagaa cggagagatc gtggtgtccc tggtgaacgg acgtccgggc 720 gccatgaatt teteetaete geegetgeta egtgagttea eeaaggeeae eaaegteege 780 etgegettee tgegtaceaa caegetgetg ggeeatetea tggggaagge getgegggae 840 cccacggtca cccgccggta ttattacagc atcaaggata tcagcatcgg aggccgctgt 900 gtctgccacg gccacgcgga tgcctgcgat gccaaagacc ccacggaccc gttcaggctg 960 cagtgcacct gccagcacaa cacctgcggg ggcacctgcg accgctgctg ccccggcttc 1020 aatcagcage egtggaagee tgegaetgee aacagtgeea acgagtgeea gteetgtaae 1080 tgctacggcc atgccaccga ctgttactac gaccctgagg tggaccggcg ccgcgccagc 1140 cagageetgg atggeaceta teagggtggg ggtgtetgta tegaetgeea geaceacace 1200 accggcgtca actgtgagcg ctgcctgccc ggcttctacc gctctcccaa ccaccctctc 1260 gactogococ acgtotgocog cogotgoaac tgogagtoog acttoacgga tggcacotgo 1320 gaggacctga cgggtcgatg ctactgccgg cccaacttct ctggggagcg gtgtgacgtg 1380 tgtgccgagg gcttcacggg cttcccaagc tgctacccga cgccctcgtc ctccaatgac 1440 accagggage aggtgetgee ageeggeeag attgtgaatt gtgaetgeag egeggeaggg 1500 acccagggca acgcctgccg gaaggaccca agggtgggac gctgtctgtg caaacccaac 1560 ttccaaggca cccattgtga gctctgcgcg ccagggttct acggccccgg ctgccagccc 1620 tgccagtgtt ccagccctgg agtggccgat gaccgctgtg accctgacac aggccagtgc 1680 aggtgccgag tgggcttcga gggggccaca tgtgatcgct gtgcccccgg ctactttcac 1740 ttccctctct gccagttgtg tggctgcagc cctgcaggaa ccttgcccga gggctgcgat 1800 gaggeeggee getgeetatg ceageetgag tttgetggae eteattgtga eeggtgeege 1860 cctggctacc atggtttccc caactgccaa gcatgcacct gcgaccctcg gggagccctg 1920 gaccagetet gtggggeggg aggtttgtge egetgeegee eeggetaeae aggeaetgee 1980 tgccaggaat gcagccccgg ctttcacggc ttccccagct gtgtcccctg ccactgctct 2040 qctqaaqqct ccctqcacqc agcctqtqac ccccqqaqtq gqcaqtqcaq ctqccqgccc 2100

```
cgtgtgacgg ggctgcggtg tgacacatgt gtgcccggtg cctacaactt cccctactgc 2160
gaagetgget ettgecacce tgeeggtetg geeceagtgg ateetgeeet teetgaggea 2220
caggttccct gtatgtgccg ggctcacgtg gaggggccga gctgtgaccg ctgcaaacct 2280
gggttctggg gactgagccc cagcaacccc gagggctgta cccgctgcag ctgcgacctc 2340
aggggcacac tgggtggagt tgctgagtgc cagccgggca ccggccagtg cttctgcaag 2400
ccccacgtgt gcggccaggc ctgcgcgtcc tgcaaggatg gcttctttgg actggatcag 2460
gctgactatt ttggctgccg cagctgccgg tgtgacattg gcggtgcact gggccagagc 2520
tgtgaaccga ggacgggcgt ctgccggtgc cgccccaaca cccagggccc cacctgcagc 2580
gagcctgcga gggaccacta cctcccggac ctgcaccacc tgcgcctgga gctggaggag 2640
gctgccacac ctgagggtca cgccgtgcgc tttggcttca accccctcga gttcgagaac 2700
ttcagctgga ggggctacgc gcagatggca cctgtccagc ccaggatcgt ggccaggctg 2760
aacctgacct cccctgacct tttctggctc gtcttccgat acgtcaaccg gggggccatg 2820
agtgtgageg ggegggtete tgtgegagag gagggeaggt eggeeacetg egeeaactge 2880
acagcacaga gtcagcccgt ggccttccca cccagcacgg agcctgcctt catcaccgtg 2940
ccccagaggg gcttcggaga gccctttgtg ctgaaccctg gcacctgggc cctgcgtgtg 3000
gaggccgaag gggtgctcct ggactacgtg gttctgctgc ctagcgcata ctacgaggcg 3060
gcgctcctgc agctgcgggt gactgaggcc tgcacatacc gtccctctgc ccagcagtct 3120
ggcgacaact gcctcctcta cacacacctc cccctggatg gcttcccctc ggccgccggg 3180
ctggaggccc tgtgtcgcca ggacaacagc ctgccccggc cctgccccac ggagcagctc 3240
agecegtege accegecact gateacetge aegggeagtg atgtggaegt ceagetteaa 3300
gtggcagtgc cacagccagg ccgctatgcc ctagtggtgg agtacgccaa tgaggatgcc 3360
cgccaggagg tgggcgtggc cgtgcacacc ccacagcggg ccccccagca ggggctgctc 3420
teeetgeace cetgeetgta cageaceetg tgeeggggea etgeeeggga taeeeaggae 3480
cacctggctg tettecacet ggaeteggag gecagegtga ggeteaeage egaaeaggea 3540
cgcttcttcc tgcacggggt cactctggtg cccattgagg agttcagccc ggagttcgtg 3600
gageceeggg teagetgeat eageageeac ggegeetttg geeceaacag tgeegeetgt 3660
ctgccctcgc gcttcccaaa gccgccccag cccatcatcc tcagggactg ccaggtgatc 3720
ccgctgccgc ccggcctccc gctgacccac gcgcaggatc tcactccagc catgtcccca 3780
gctggacccc gacctcggcc ccccaccgct gtggaccctg atgcagagcc caccctgctg 3840
cgtgagcccc aggccaccgt ggtcttcacc acccatgtgc ccacgctggg ccgctatgcc 3900
ttcctgctgc acggctacca gccagcccac cccaccttcc ccgtggaagt cctcatcaac 3960
geoggeogeg tgtggcaggg ccacgecaac geoagettet gtecacatgg ctacggetge 4020
cgcaccetgg tggtgtgtga gggccaggcc ctgctggacg tgacccacag cgagctcact 4080
gtgaccgtgc gtgtgcccaa gggccggtgg ctctggctgg attatgtact cgtggtccct 4140
gagaacgtct acagctttgg ctacctccgg gaggagcccc tggataaatc ctatgacttc 4200
atcagccact gcgcagccca gggctaccac atcagcccca gcagctcatc cctgttctgc 4260
cgaaacgctg ctgcttccct ctccctcttc tataacaacg gagcccgtcc atgtggctgc 4320
cacgaagtag gtgctacagg ccccacgtgt gagcccttcg ggggccagtg tccctgccat 4380
gcccatgtca ttggccgtga ctgctcccgc tgtgccaccg gatactgggg cttccccaac 4440
tgcaggccct gtgactgcgg tgcccgcctc tgtgacgagc tcacgggcca gtgcatctgc 4500
```

```
ccgccacgca ccatcccgcc cgactgcctg ctgtgccagc cccagacctt tggctgccac 4560
cccctggtcg gctgtgagga gtgtaactgc tcagggcccg gcatccagga gctcacagac 4620
cctacctgtg acacagacag cggccagtgc aagtgcagac ccaacgtgac tgggcgccgc 4680
tgtgatacct gctctccggg cttccatggc tacccccgct gccgcccctg tgactgtcac 4740
gaggcgggca ctgcgcctgg cgtgtgtgac cccctcacag ggcagtgcta ctgtaaggag 4800
aacgtgcagg gccccaaatg tgaccagtgc agccttggga ccttctcact ggatgctgcc 4860
aaccccaaag gttgcacccg ctgcttctgc tttggggcca cggagcgctg ccggagctcg 4920
tectacacce gecaggagtt egtggatatg gagggatggg tgetgetgag caetgaeegg 4980
caggtggtgc cccacgagcg gcagccaggg acggagatgc tccgtgcaga cctgcggcac 5040
gtgcctgagg ctgtgcccga ggctttcccc gagctgtact ggcaggcccc accctcctac 5100
ctgggggacc gggtgtcatc ctacggtggg accetecgtt atgaactgca ctcagagacc 5160
cagcggggag atgtctttgt ccccatggag agcaggccgg atgtggtgct gcagggcaac 5220
cagatgagca tcacattcct ggagccggca taccccacgc ctggccacgt tcaccgtggg 5280
cagctgcagc tggtggaggg gaacttccgg catacggaga cgcgcaacac tgtgtcccgc 5340
gaggagetea tgatggtget ggeeageetg gageagetge agateegtge ectettetea 5400
cagatetect eggetgtett eetgegeagg gtggeaetgg aggtggeeag eecageagge 5460
cagggggccc tggccagcaa tgtggagctg tgcctgtgcc ccgccagcta ccggggggac 5520
tcatgccagg aatgtgcccc cggcttctat cgggacgtca aaggtctctt cctgggccga 5580
tgtgtccctt gtcagtgcca tggacactca gaccgctgcc tccctggctc tggcgtctgt 5640
gtggactgcc agcacaacac cgaaggggcc cactgtgagc gctgccaggc tggcttcgtg 5700
agcagcaggg acgaccccag cgcccctgt gtcagctgcc cctgccccct ctcagtgcct 5760
tccaacaact tcgccgaggg ctgtgtcctg cgaggcggcc gcacccagtg cctctgcaaa 5820
cctggttatg caggtgcctc ctgcgagcgg tgtgcgcccg gattctttgg gaacccactg 5880
gtgctgggca gctcctgcca gccatgcgac tgcagcggca acggtgaccc caacttgctc 5940
ttcagcgact gcgaccccct gacgggcgcc tgccgtggct gcctgcgcca caccactggg 6000
ccccgctgcg agatctgtgc ccccggcttc tacggcaacg ccctgctgcc cggcaactgc 6060
acceggtgeg actgtacece atgtgggaca gaggeetgeg acceecacag egggeactge 6120
ctgtgcaagg cgggcgtgac tgggcggcgc tgtgaccgct gccaggaggg acattttggt 6180
ttcgatggct gcgggggctg ccgccgtgt gcttgtggac cggccgccga gggctccgag 6240
tgccacccc agageggaca gtgccaetge egaceaggga ecatgggace ecagtgeege 6300
gagtgtgccc ctggctactg ggggctccct gagcagggct gcaggcgctg ccagtgccct 6360
gggggccgct gtgaccctca cacgggccgc tgcaactgcc ccccggggct cagcggggag 6420
cgctgcgaca cctgcagcca gcagcatcag gtgcctgttc caggcgggcc tgtgggccac 6480
agcatccact gtgaagtgtg tgaccactgt gtggtcctgc tectggatga ectggaacgg 6540
gccggcgccc tcctccccgc cattcacgag caactgcgtg gcatcaatgc cagctccatg 6600
gcctgggccc gtctgcacag gctgaacgcc tccatcgctg acctgcagag ccagctccgg 6660
agececetgg geceegeea tgagaeggea eageagetgg aggtgetgga geageagage 6720
acaageeteg ggeaggaege aeggeggeta ggeggeeagg eaggageece aagaeeeeee 6780
agggccccgg gaggctttca cctgtaccag gcgagccaat tgctggccgg caccgaggcc 6840
acactgggcc atgcgaagac gctgttggcg gccatccggg ctgtggaccg caccctgagc 6900
```

```
gageteatgt eccagaeggg ecacetgggg etggeeaatg ecteggetee ateaggtgag 6960
cagctgctcc ggacactggc cgaggtggag cggctgctct gggagatgcg ggcccgggac 7020
ctgggggccc cgcaggcagc agctgaggct gagttggctg cagcacagag attgctggcc 7080
cgggtgcagg agcagctgag cagcctctgg gaggagaacc aggcactggc cacacaaacc 7140
cgcgaccggc tggcccagca cgaggccggc ctcatggacc tgcgagaggc tttgaaccgg 7200
gcagtggacg ccacacggga ggcccaggag ctcaacagcc gcaaccagga gcgcctggag 7260
gaagccctgc aaaggaagca ggagctgtcc cgggacaatg ccaccctgca ggccactctg 7320
catgcggcta gggacaccct ggccagcgtc ttcagattgc tgcacagcct ggaccaggct 7380
aaggaggage tggagegeet egeegeeage etggatgggg eteggaeeee aetgetgeag 7440
aggatgcaga ccttctcccc ggcgggcagc aagctgcgtc tagtggaggc cgccgaggcc 7500
cacgcacage agetgggeea getggeacte aatetgteea geateateet ggaegteaae 7560
caggaccgcc tcacccagag ggccatcgag gcctccaacg cctacagccg catcctgcag 7620
gccgtgcagg ctgccgagga tgctgctggc caggccctgc agcaggcgga ccacacgtgg 7680
gcgacggtgg tgcggcaggg cctggtggac cgagcccagc agctcctggc caacagcact 7740
gcactagaag aggccatgct ccaggaacag cagaggctgg gccttgtgtg ggctgccctc 7800
cagggtgcca ggacccagct ccgagatgtc cgggccaaga aggaccagct ggaggcgcac 7860
atccaggegg egeaggeeat gettgeeatg gacacagaeg agacaageaa gaagategea 7920
catgccaagg ctgtggctgc tgaagcccag gacaccgcca cccgtgtgca gtcccagctg 7980
caggccatgc aggagaatgt ggagcggtgg cagggccagt acgagggcct gcggggccag 8040
gacctgggcc aggcagtgct tgacgcaggc cactcagtgt ccaccctgga gaagacgctg 8100
ccccagctgc tggccaagct gagcatcctg gagaaccgtg gggtgcacaa cgccagcctg 8160
geoetgteeg ceageattgg cegegtgega gageteattg eecaggeeeg gggggetgee 8220
agtaaggtca aggtgcccat gaagttcaac gggcgctcag gggtgcagct gcgcacccca 8280
cgggatettg ccgacettge tgeetacaet geeeteaagt tetacetgea gggeecagag 8340
cctgagcctg ggcagggtac cgaggatcgc tttgtgatgt acatgggcag ccgccaggcc 8400
actggggact acatgggtgt gtctctgcgt gacaagaagg tgcactgggt gtatcagctg 8460
ggtgaggegg gccctgcagt cctaagcatc gatgaggaca ttggggagca gttcgcagct 8520
gtcagcctgg acaggactct ccagtttggc cacatgtccg tcacagtgga gagacagatg 8580
atccaggaaa ccaagggtga cacggtggcc cctggggcag aggggctgct caacctgcgg 8640
ccagacgact tegtetteta egtegggggg taccecagta cetteaegee eceteceetg 8700
cttcgcttcc ccggctaccg gggctgcatc gagatggaca cgctgaatga ggaggtggtc 8760
agectetaca aettegagag gaeetteeag etggacaegg etgtggacag geettgtgee 8820
cgctccaagt cgaccgggga cccgtggctc acggacggct cctacctgga cggcaccggc 8880
ttegeeegea teagettega eagteagate ageaeeacea agegettega geaggagetg 8940
eggetegtgt ectaeagegg ggtgetette tteetgaage ageagageea gtteetgtge 9000
ttggccgtgc aagaaggcag cctcgtgctg ttgtatgact ttggggctgg cctgaaaaag 9060
geogteceae tgeageceee acegeceetg aceteggeea geaaggegat ceaggtgtte 9120
ctgctggggg gcagccgcaa gcgtgtgctg gtgcgtgtgg agcgggccac ggtgtacagc 9180
gtggagcagg acaatgatet ggagetggee gaegeetaet acetgggggg egtgeegee 9240
gaccagetge eccegageet gegacggete ttecceaeeg gaggeteagt eegtggetge 9300
```

```
gtcaaaggca tcaaggccct gggcaagtat gtggacctca agcggctgaa cacgacaggc 9360
gtgagcgccg gctgcaccgc cgacctgctg gtggggcgcg ccatgacttt ccatggccac 9420
ggetteette geetggeget etegaaegtg geaeegetea etggeaaegt etaeteegge 9480
ttcggcttcc acagcgccca ggacagtgcc ctgctctact accgggcgtc cccggatggg 9540
ctatgccagg tgtccctgca gcagggccgt gtgagcctac agctcctgag gactgaagtg 9600
aaaactcaag cgggcttcgc cgatggtgcc ccccattacg tcgccttcta cagcaatgcc 9660
acgggagtct ggctgtatgt cgatgaccag ctccagcaga tgaagcccca ccggggacca 9720
cccccgage tecageegea geetgagggg cccccgagge tecteetggg aggeetgeet 9780
gagtetggca ceatttacaa etteagtgge tgeateagea aegtettegt geageggete 9840
ctgggcccac agcgcgtatt tgatctgcag cagaacctgg gcagcgtcaa tgtgagcacg 9900
ggctgtgcac ccgccctgca agcccagacc ccgggcctgg ggcctagagg actgcaggcc 9960
accgcccgga aggcctcccg ccgcagccgt cagcccgccc ggcatcctgc ctgcatgctg 10020
ccccacacc tcaggaccac ccgagactcc taccagtttg ggggttccct gtccagtcac 10080
ctggagtttg tgggcatcct ggcccgacat aggaactggc ccagtctctc catgcacgtc 10140
ctcccgcgaa gctcccgagg cctcctcctc ttcactgccc gtctgaggcc cggcagcccc 10200
teeetggege tetteetgag caatggeeae ttegttgeae agatggaagg eetegggaet 10260
cggctccgcg cccagagccg ccagcgctcc cggcctggcc gctggcacaa ggtctccgtg 10320
cgctgggaga agaaccggat cctgctggtg acggacgggg cccgggcctg gagccaggag 10380
gggccgcacc ggcagcacca gggggcagag cacccccagc cccacaccct ctttgtgggc 10440
ggcctcccgg ccagcagcca cagctccaaa cttccggtga ccgtcgggtt cagcggctgt 10500
gtgaagagac tgaggctgca cgggaggccc ctgggggccc ccacacggat ggcaggggtc 10560
acaccetgea tettgggeec cetggaggeg ggeetgttet teccaggeag egggggagtt 10620
atcactttag acctcccagg agctacactg cctgatgtgg gcctggaact ggaggtgcgg 10680
cccctggcag tcaccggact gatcttccac ttgggccagg cccggacgcc cccctacttg 10740
cagttgcagg tgaccgagaa gcaagtcctg ctgcgggcgg atgacggagc aggggagttc 10800
tocacgtcag tgaccegece etcagtgetg tgtgatggee agtggeaceg getageggtg 10860
atgaaaagcg ggaatgtgct ccggctggag gtggacgcgc agagcaacca caccgtgggc 10920
cccttgctgg cggctgcagc tggtgcccca gcccctctgt acctcggggg cctgcctgag 10980
cccatggccg tgcagccctg gcccccgcc tactgcggct gcatgaggag gctggcggtg 11040
aaccggtccc ccgtcgccat gactcgctct gtggaggtcc acggggcagt gggggccagt 11100
                                                                  11118
ggctgcccag ccgcctag
```

```
<210> 9
```

#### <400> 9

atggcgaage ggctctgcge ggggagegea etgtgtgtte geggeeeeeg gggeeeegeg 60 eegetgetge tggteggget ggegetgetg ggegeggeg gggegegga ggaggeggge 120

<sup>&</sup>lt;211> 11091

<sup>&</sup>lt;212> DNA

<sup>&</sup>lt;213> Homo sapiens

```
ggcggcttca gcctgcaccc gccctacttc aacctggccg agggcgcccg catcgccgcc 180
teegegaeet geggagagga ggeeeeggeg egeggeteee egegeeeeae egaggaeett 240
tactgcaage tggtaggggg ccccgtggcc ggcggcgacc ccaaccagac catccggggc 300
cagtactgtg acatetgeae ggetgeeaae ageaacaagg cacaeeeege gageaatgee 360
atcgatggca cggagcgctg gtggcagagt ccaccgctgt cccgcggcct ggagtacaac 420
gaggtcaacg tcaccctgga cctgggccag gtcttccacg tggcctacgt cctcatcaag 480
tttgccaact caccccggcc ggacctctgg gtgctggagc ggtccatgga cttcggccgc 540
acctaccage cetggeagtt etttgeetee tecaagaggg actgtetgga geggtteggg 600
ccacagacgc tggagcgcat cacacgggac gacgcggcca tctgcaccac cgagtactca 660
cgcatcgtgc ccctggagaa cggagagatc gtggtgtccc tggtgaacgg acgtccgggc 720
gccatgaatt teteetaete geegetgeta egtgagttea eeaaggeeae eaaegteege 780
ctgcgcttcc tgcgtaccaa cacgctgctg ggccatctca tggggaaggc gctgcgggac 840
cccacggtca cccgccggta ttattacage atcaaggata tcagcatcgg aggccgctgt 900
gtctgccacg gccacgcgga tgcctgcgat gccaaagacc ccacggaccc gttcaggctg 960
cagtgcacct gccagcacaa cacctgcggg ggcacctgcg accgctgctg ccccggcttc 1020
aatcagcage egtggaagee tgegaetgee aacagtgeea aegagtgeea gteetgtaae 1080
tgctacggcc atgccaccga ctgttactac gaccctgagg tggaccggcg ccgcgccagc 1140
cagageetgg atggeaceta teagggtggg ggtgtetgta tegaetgeea geaceacace 1200
accggcgtca actgtgagcg ctgcctgccc ggcttctacc gctctcccaa ccaccctctc 1260
gactegeece aegtetgeeg eegetgeaac tgegagteeg aetteaegga tggeaectge 1320
gaggacctga cgggtcgatg ctactgccgg cccaacttct ctggggagcg gtgtgacgtg 1380
tgtgccgagg gcttcacggg cttcccaagc tgctacccga cgccctcgtc ctccaatgac 1440
accagggage aggtgetgee ageeggeeag attgtgaatt gtgaetgeag egeggeaggg 1500
acccagggca acgcctgccg gaaggaccca agggtgggac gctgtctgtg caaacccaac 1560
ttccaaggca cccattgtga gctctgcgcg ccagggttct acggccccgg ctgccagccc 1620
tgccagtgtt ccagccctgg agtggccgat gaccgctgtg accctgacac aggccagtgc 1680
aggtgccgag tgggcttcga gggggccaca tgtgatcgct gtgcccccgg ctactttcac 1740
ttccctctct gccagttgtg tggctgcagc cctgcaggaa ccttgcccga gggctgcgat 1800
gaggccggcc gctgcctatg ccagcctgag tttgctggac ctcattgtga ccggtgccgc 1860
cctggctacc atggtttccc caactgccaa gcatgcacct gcgaccctcg gggagccctg 1920
gaccagetet gtggggeggg aggtttgtge egetgeegee eeggetacae aggeaetgee 1980
tgccaggaat gcagccccgg ctttcacggc ttccccagct gtgtcccctg ccactgctct 2040
gctgaagget ccctgcacge agcctgtgae ccccggagtg ggcagtgcag ctgccggccc 2100
cgtgtgacgg ggctgcggtg tgacacatgt gtgcccggtg cctacaactt cccctactgc 2160
gaagetgget ettgecacce tgeeggtetg geeceagtgg atectgeeet teetgaggea 2220
caggitecet gtatgigeeg ggeteaegig gaggggeega getgigaeeg etgeaaacet 2280
gggttctggg gactgagccc cagcaacccc gagggctgta cccgctgcag ctgcgacctc 2340
aggggcacac tgggtggagt tgctgagtgc cagccgggca ccggccagtg cttctgcaag 2400
ccccacgtgt gcggccaggc ctgcgcgtcc tgcaaggatg gcttctttgg actggatcag 2460
gctgactatt ttggctgccg cagctgccgg tgtgacattg gcggtgcact gggccagagc 2520
```

```
tgtgaaccga ggacgggcgt ctgccggtgc cgccccaaca cccagggccc cacctgcagc 2580
gagectgega gggaccacta ceteceggae etgeaceace tgegeetgga getggaggag 2640
gctgccacac ctgagggtca cgccgtgcgc tttggcttca accccctcga gttcgagaac 2700
ttcagctgga ggggctacgc gcagatggca cctgtccagc ccaggatcgt ggccaggctg 2760
aacctgacct cccctgacct tttctggctc gtcttccgat acgtcaaccg gggggccatg 2820
agtgtgagcg ggcgggtctc tgtgcgagag gagggcaggt cggccacctg cgccaactgc 2880
acagcacaga gtcagcccgt ggccttccca cccagcacgg agcctgcctt catcaccgtg 2940
ccccagaggg gcttcggaga gccctttgtg ctgaaccctg gcacctgggc cctgcgtgtg 3000
gaggeegaag gggtgeteet ggaetaegtg gttetgetge etagegeata etaegaggeg 3060
gcgctcctgc agctgcgggt gactgaggcc tgcacatacc gtccctctgc ccagcagtct 3120
ggcgacaact gcctcctcta cacacacctc cccctggatg gcttcccctc ggccgccggg 3180
ctggaggccc tgtgtcgcca ggacaacagc ctgccccggc cctgccccac ggagcagctc 3240
agecegtege accegecact gateacetge aegggeagtg atgtggaegt ceagetteaa 3300
gtggcagtgc cacagccagg ccgctatgcc ctagtggtgg agtacgccaa tgaggatgcc 3360
cgccaggagg tgggcgtggc cgtgcacacc ccacagcggg ccccccagca ggggctgctc 3420
teeetgeace cetgeetgta cageaceetg tgeeggggea etgeeeggga taeecaggae 3480
cacctggctg tettecacet ggaeteggag gecagegtga ggeteaeage egaaeaggea 3540
cgcttcttcc tgcacggggt cactctggtg cccattgagg agttcagccc ggagttcgtg 3600
gageceeggg teagetgeat eageageeae ggegeetttg geeceaaeag tgeegeetgt 3660
ctgccctcgc gcttcccaaa gccgccccag cccatcatcc tcagggactg ccaggtgatc 3720
cegetgeege eeggeeteee getgaeecae gegeaggate teacteeage catgteecea 3780
gctggacccc gacctcggcc ccccaccgct gtggaccctg atgcagagcc caccctgctg 3840
cgtgagcccc aggccaccgt ggtcttcacc acccatgtgc ccacgctggg ccgctatgcc 3900
ttcctgctgc acggctacca gccagcccac cccaccttcc ccgtggaagt cctcatcaac 3960
geoggeogeg tgtggeaggg ceaegeeaac geoagettet gteeacatgg etaeggetge 4020
cgcaccctgg tggtgtgta gggccaggcc ctgctggacg tgacccacag cgagctcact 4080
gtgaccgtgc gtgtgcccaa gggccggtgg ctctggctgg attatgtact cgtggtccct 4140
gagaacgtct acagctttgg ctacctccgg gaggagcccc tggataaatc ctatgacttc 4200
atcagecaet gegeagecea gggetaecae atcagececa geageteate eetgttetge 4260
cgaaacgctg ctgcttccct ctccctcttc tataacaacg gagcccgtcc atgtggctgc 4320
cacgaagtag gtgctacagg ccccacgtgt gagcccttcg ggggccagtg tccctgccat 4380
gcccatgtca ttggccgtga ctgctcccgc tgtgccaccg gatactgggg cttccccaac 4440
tgcaggccct gtgactgcgg tgcccgcctc tgtgacgagc tcacgggcca gtgcatctgc 4500
cegecaegea ceatecegee egactgeetg etgtgeeage eccagaeett tggetgeeae 4560
cccctggtcg gctgtgagga gtgtaactgc tcagggcccg gcatccagga gctcacagac 4620
cctacctgtg acacagacag cggccagtgc aagtgcagac ccaacgtgac tgggcgccgc 4680
tgtgatacct gctctccggg cttccatggc tacccccgct gccgcccctg tgactgtcac 4740
gaggegggea etgegeetgg egtgtgtgae ecceteaeag ggeagtgeta etgtaaggag 4800
aacgtgcagg gccccaaatg tgaccagtgc agccttggga ccttctcact ggatgctgcc 4860
aaccccaaag gttgcacccg ctgcttctgc tttggggcca cggagcgctg ccggagctcg 4920
```

```
tectacacee gecaggagtt egtggatatg gagggatggg tgetgetgag eactgacegg 4980
caggtggtgc cccacgagcg gcagccaggg acggagatgc tccgtgcaga cctgcggcac 5040
gtgcctgagg ctgtgcccga ggctttcccc gagctgtact ggcaggcccc accetectae 5100
ctgggggacc gggtgtcatc ctacggtggg accetecgtt atgaactgca ctcagagacc 5160
cagcggggag atgtctttgt ccccatggag agcaggccgg atgtggtgct gcagggcaac 5220
cagatgagca tcacattcct ggagccggca taccccacgc ctggccacgt tcaccgtggg 5280
cagctgcagc tggtggaggg gaacttccgg catacggaga cgcgcaacac tgtgtcccgc 5340
gaggagetea tgatggtget ggeeageetg gageagetge agateegtge cetettetea 5400
cagatetect eggetgtett eetgegeagg gtggeaetgg aggtggeeag eecageagge 5460
cagggggccc tggccagcaa tgtggagctg tgcctgtgcc ccgccagcta ccggggggac 5520
tcatgccagg aatgtgcccc cggcttctat cgggacgtca aaggtctctt cctgggccga 5580
tgtgtccctt gtcagtgcca tggacactca gaccgctgcc tccctggctc tggcgtctgt 5640
gtggactgcc agcacaacac cgaaggggcc cactgtgagc gctgccaggc tggcttcgtg 5700
agcagcaggg acgaccccag cgcccctgt gtcagctgcc cctgccccct ctcagtgcct 5760
tccaacaact tcgccgaggg ctgtgtcctg cgaggcggcc gcacccagtg cctctgcaaa 5820
cctggttatg caggtgcctc ctgcgagcgg tgtgcgcccg gattctttgg gaacccactg 5880
gtgctgggca gctcctgcca gccatgcgac tgcagcggca acggtgaccc caacttgctc 5940
ttcagcgact gcgaccccct gacgggcgcc tgccgtggct gcctgcgcca caccactggg 6000
ccccgctgcg agatetgtgc ecccggette tacggcaacg ecctgetgce eggcaactge 6060
acceggtgeg actgtacece atgtgggaca gaggeetgeg acceecacag egggeactge 6120
ctgtgcaagg cgggcgtgac tgggcggcgc tgtgaccgct gccaggaggg acattttggt 6180
ttcgatggct gcgggggctg ccgccgtgt gcttgtggac cggccgccga gggctccgag 6240
tgccacccc agagcggaca gtgccactgc cgaccaggga ccatgggacc ccagtgccgc 6300
gagtgtgccc ctggctactg ggggctccct gagcagggct gcaggcgctg ccagtgccct 6360
gggggccgct gtgaccctca cacgggccgc tgcaactgcc ccccggggct cagcggggag 6420
cgctgcgaca cctgcagcca gcagcatcag gtgcctgttc caggcgggcc tgtgggccac 6480
agcatccact gtgaagtgtg tgaccactgt gtggtcctgc tcctggatga cctggaacgg 6540
geoggegeee tecteceege catteaegag caactgegtg geateaatge eageteeatg 6600
gcctgggccc gtctgcacag gctgaacgcc tccatcgctg acctgcagag ccagctccgg 6660
agccccctgg gcccccgcca tgagacggca cagcagctgg aggtgctgga gcagcagagc 6720
acaageeteg ggeaggaege aeggeggeta ggeggeeagg eageegtggg gaeeegagae 6780
caggegagee aattgetgge eggeacegag gecacaetgg gecatgegaa gaegetgttg 6840
geggeeatee gggetgtgga eegeaceetg agegagetea tgteeeagae gggeeacetg 6900
gggctggcca atgcctcggc tccatcaggt gagcagctgc tccggacact ggccgaggtg 6960
gageggetge tetgggagat gegggeeegg gaeetggggg eeeegeagge ageagetgag 7020
gctgagttgg ctgcagcaca gagattgctg gcccgggtgc aggagcagct gagcagcctc 7080
tgggaggaga accaggcact ggccacacaa acccgcgacc ggctggccca gcacgaggcc 7140
ggcctcatgg acctgcgaga ggctttgaac cgggcagtgg acgccacacg ggaggcccag 7200
gageteaaca geegeaacea ggagegeetg gaggaageee tgeaaaggaa geaggagetg 7260
tecegggaea atgecaeeet geaggeeaet etgeatgegg etagggaeae eetggeeage 7320
```

```
gtcttcagat tgctgcacag cctggaccag gctaaggagg agctggagcg cctcgccgcc 7380
ageetggatg gggeteggae eeeactgetg eagaggatge agaeettete eeeggeggge 7440
agcaagetge gtetagtgga ggeegeegag geeeaegeae agcagetggg ceagetggea 7500
ctcaatctgt ccagcatcat cctggacgtc aaccaggacc gcctcaccca gagggccatc 7560
gaggeeteea aegeetaeag eegeateetg eaggeegtge aggetgeega ggatgetget 7620
ggccaggccc tgcagcaggc ggaccacacg tgggcgacgg tggtgcggca gggcctggtg 7680
gaccgagccc agcagctcct ggccaacagc actgcactag aagaggccat gctccaggaa 7740
cagcagagge tgggcettgt gtgggetgee etecagggtg ecaggaeeca geteegagat 7800
gtccgggcca agaaggacca gctggaggcg cacatccagg cggcgcaggc catgcttgcc 7860
atggacacag acgagacaag caagaagatc gcacatgcca aggctgtggc tgctgaagcc 7920
caggacaccg ccacccgtgt gcagtcccag ctgcaggcca tgcaggagaa tgtggagcgg 7980
tggcagggcc agtacgaggg cctgcggggc caggacctgg gccaggcagt gcttgacgca 8040
ggccactcag tgtccaccct ggagaagacg ctgccccagc tgctggccaa gctgagcatc 8100
ctggagaacc gtggggtgca caacgccagc ctggccctgt ccgccagcat tggccgcgtg 8160
cgagagetea ttgcccagge cegggggget gccagtaagg teaaggtgee catgaagtte 8220
aacgggcgct caggggtgca gctgcgcacc ccacgggatc ttgccgacct tgctgcctac 8280
actgccctca agttctacct gcagggccca gagcctgagc ctgggcaggg taccgaggat 8340
cgctttgtga tgtacatggg cagccgccag gccactgggg actacatggg tgtgtctctg 8400
cgtgacaaga aggtgcactg ggtgtatcag ctgggtgagg cgggccctgc agtcctaagc 8460
ategatgagg acattgggga gcagttegea getgteagee tggacaggae tetecagttt 8520
ggccacatgt ccgtcacagt ggagagacag atgatccagg aaaccaaggg tgacacggtg 8580
gcccctgggg cagaggggct gctcaacctg cggccagacg acttcgtctt ctacgtcggg 8640
gggtacccca gtaccttcac gccccctccc ctgcttcgct tccccggcta ccggggctgc 8700
atcgagatgg acacgctgaa tgaggaggtg gtcagcctct acaacttcga gaggaccttc 8760
cagctggaca cggctgtgga caggccttgt gcccgctcca agtcgaccgg ggacccgtgg 8820
ctcacggacg gctcctacct ggacggcacc ggcttcgccc gcatcagctt cgacagtcag 8880
atcagcacca ccaagcgctt cgagcaggag ctgcggctcg tgtcctacag cggggtgctc 8940
ttcttcctga agcagcagag ccagttcctg tgcttggccg tgcaagaagg cagcctcgtg 9000
ctgttgtatg actttggggc tggcctgaaa aaggccgtcc cactgcagcc cccaccgccc 9060
ctgacctcgg ccagcaaggc gatccaggtg ttcctgctgg ggggcagccg caagcgtgtg 9120
ctggtgcgtg tggagcgggc cacggtgtac agcgtggagc aggacaatga tctggagctg 9180
gccgacgcct actacctggg gggcgtgccg cccgaccagc tgcccccgag cctgcgacgg 9240
ctcttcccca ccggaggctc agtccgtggc tgcgtcaaag gcatcaaggc cctgggcaag 9300
tatgtggacc tcaagcggct gaacacgaca ggcgtgagcg ccggctgcac cgccgacctg 9360
ctggtggggc gcgccatgac tttccatggc cacggcttcc ttcgcctggc gctctcgaac 9420
gtggcacege teactggcaa egtetaetee ggettegget tecacagege eeaggacagt 9480
geoetgetet actaceggge gteeceggat gggetatgee aggtgteeet geageaggge 9540
cgtgtgagcc tacagctcct gaggactgaa gtgaaaactc aagcgggctt cgccgatggt 9600
gccccccatt acgtcgcctt ctacagcaat gccacgggag tctggctgta tgtcgatgac 9660
cagetecage agatgaagee ceaeegggga ceaeeeeeeg agetecagee geageetgag 9720
```

```
gggcccccga ggctcctcct gggaggcctg cctgagtctg gcaccattta caacttcagt 9780
qgctqcatca gcaacgtctt cgtgcagcgg ctcctgggcc cacagcgcgt atttgatctg 9840
cagcagaacc tgggcagcgt caatgtgagc acgggctgtg cacccgccct gcaagcccag 9900
acccegggce tggggcetag aggactgcag gccacegece ggaaggcete eegeegeage 9960
cgtcagcccg cccggcatcc tgcctgcatg ctgccccac acctcaggac cacccgagac 10020
tectaceagt ttgggggtte cetgteeagt cacetggagt ttgtgggeat eetggeeega 10080
cataggaact ggcccagtct ctccatgcac gtcctcccgc gaagctcccg aggcctcctc 10140
ctcttcactg cccgtctgag gcccggcagc ccctccctgg cgctcttcct gagcaatggc 10200
cacttegttg cacagatgga aggeeteggg acteggetee gegeeeagag eegeeagege 10260
teceggeetg geogetggea caaggtetee gtgegetggg agaagaaceg gateetgetg 10320
gtgacggacg gggcccgggc ctggagccag gaggggccgc accggcagca ccagggggca 10380
gagcacccc agccccacac cetetttgtg ggeggeetee eggeeageag ecacagetee 10440
aaacttccgg tgaccgtcgg gttcagcggc tgtgtgaaga gactgaggct gcacgggagg 10500
cccctggggg cccccacacg gatggcaggg gtcacaccct gcatcttggg ccccctggag 10560
gegggeetgt tetteeeagg eagegggga gttateaett tagaeeteee aggagetaea 10620
ctgcctgatg tgggcctgga actggaggtg cggcccctgg cagtcaccgg actgatcttc 10680
cacttgggcc aggcccggac gccccctac ttgcagttgc aggtgaccga gaagcaagtc 10740
ctgctgcggg cggatgacgg agcaggggag ttctccacgt cagtgacccg cccctcagtg 10800
ctgtgtgatg gccagtggca ccggctagcg gtgatgaaaa gcgggaatgt gctccggctg 10860
gaggtggacg cgcagagcaa ccacaccgtg ggccccttgc tggcggctgc agctggtgcc 10920
ccagccctc tgtacctcgg gggcctgcct gagcccatgg ccgtgcagcc ctggcccccc 10980
gcctactgcg gctgcatgag gaggctggcg gtgaaccggt cccccgtcgc catgactcgc 11040
tctgtggagg tccacggggc agtggggcc agtggctgcc cagccgccta g
                                                                  11091
```

<210> 10 <211> 1014 <212> DNA

<213> Homo sapiens

```
atgacaaca acagcggctc caaagccgaa ctcgttgtgg gagggaaata caaactggtg 60 cggaagatcg ggtctggctc ctttggagac gtttatctgg gcatcaccac caccaacggc 120 gaggacgtag cagtgaagct ggaatctcag aaggtcaagc accccagtt gctgtatgag 180 agcaaactct acacgattct tcaaggtggg gttggcatcc cccacatgca ctggtatggt 240 caggaaaaag acaacaatgt gctagtcatg gaccttctgg gacccagcct cgaagacctc 300 tttaatttct gttcaagaag gttcaccatg aaaactgtac ttatgttagc cgaccagatg 360 atcagcagaa ttgaatacgt gcatacaaag aattttctac accgagacat taaaccagat 420 aacttcctga tgggtactgg gcgtcactgt aataagttgt tccttattga ttttggtttg 480 gccaaaaagt acagagacaa caggaccag caacacatac cgtacagaga agataaacac 540 ctcattggca ctgtccgata tgccagcatc aatgcacatc ttggtattga gcagagccgc 600
```

```
cgagatgaca tggaatcctt aggctacgtt ttcatgtatt ttaatagaac cagcctgccg 660 tggcaaggac taagggctat gacaaaaaa caaaaatatg aaaagattag tgagaagaag 720 atgtccaccc ctgttgaagt tttatgtaag gggtttcctg cagaattcgc catgtacttg 780 aactactgtc gtgggctgcg ctttgaggaa gtcccagatt acatgtatct gaggcagcta 840 ttccgcattc ttttcaggac cctgaaccac caatatgact acacatttga ttggacgatg 900 ttaaagcaga aagcagcaca gcaggcagcc tcttccagtg ggcagggtca gcaggcccaa 960 acccagacag gcaagcaaac tgaaaaaaac aagaataatg tgaaagataa ctaa 1014
```

<210> 11

<211> 2667

<212> DNA

<213> Homo sapiens

#### <400> 11

atggagtcgc tcctgctgcc ggtgctgctg ctgctggcca tactgtggac gcaggctgcc 60 gccctcatta atctcaagta ctcggtagaa gaggagcagc gcgccgggac ggtgattgcc 120 aacgtggcca aagacgcgcg agaggcgggc ttcgcgctgg acccccggca ggcttcagcc 180 tttcgcgtgg tgtccaactc ggctccacac ctagtggaca tcaatcccag ctctggcctg 240 ctggtcacca agcagaagat tgaccgtgat ctgctgtgcc gccagagccc caagtgcatc 300 atctcgctcg aggtcatgtc cagctcaatg gaaatctgcg tgataaaggt ggagatcaag 360 gacctgaacg acaatgegee cagttteeeg geageacaga tegagetgga gateteggag 420 gcagccagcc ctggcacgcg catcccgctg gacagcgctt acgatccaga ctcaggaagc 480 tttggcgtgc agacttacga gctcacgccc aacgagctgt tcggcctgga gatcaagacg 540 cgcggcgacg gctcccgctt tgccgaactc gtggtggaaa agagcctgga ccgcgagacg 600 cagtegeact acagetteeg aateaetgeg etagaeggtg gegaeeegee gegeetggge 660 accepttggcc ttagtatcaa ggtgaccgac tccaatgaca acaacccggt gtttagcgag 720 tocacctacg eggtgagegt gecagaaaac tegeeteeca acacaccegt cateegeete 780 aacgccagcg atccagacga gggcaccaac ggccaggtgg tctactcctt ctatggctac 840 gtcaacgacc gcacgcgcga gctctttcag atcgacccgc acagtggcct ggtcactgtc 900 actggcgctt tagactacga agaggggcac gtgtacgaac tggacgtgca ggctaaggac 960 ttggggccca attccatccc ggcacactgc aaggtcaccg tcagcgtgct ggacaccaat 1020 gacaatccgc cggtcatcaa cctgctgtca gtcaacagtg agcttgtgga ggtcagcgag 1080 agegeeecc egggetacgt gategeettg gtgegggtgt etgategega eteaggeete 1140 aatggacgtg tgcagtgccg tttgctgggc aatgtgccct ttcgactgca ggaatatgag 1200 agetteteca etattetggt ggaeggaegg etggaeegeg ageageaega eeaatacaae 1260 ctcacaattc aggcacgcga cggcggcgtg cccatgctgc agagtgccaa gtcctttacc 1320 gtgctcatca ctgacgaaaa tgacaaccac ccgcactttt ccaagcccta ctaccaggtc 1380 attgtgcagg agaacaacac gcctggcgcc tatctgctct ctgtgtctgc tcgcgacccc 1440 gacctgggtc tcaacggcag tgtctcctac cagatcgtgc cgtcgcaggt gcgggacatg 1500 cctgtcttca cctatgtctc catcaatccc aactcaggcg acatctacgc gctgcgatcc 1560

```
tttaaccacg agcagaccaa ggcgttcgaa ttcaaggtgc tggccaagga cggcggcctt 1620
ccctcactgc aaagcaacgc tacggtgcgg gtcatcatcc tcgacgtcaa cgacaacacc 1680
ccggtcatca cagccccacc tctgattaac ggcactgccg aggtctacat accccgcaac 1740
tetggeatag getacetggt gaetgttgte aaggeagaag actaegatga gggegaaaat 1800
ggccgagtca cctacgacat gaccgaggc gaccgcggct tctttgaaat agaccaggtc 1860
aatggcgaag tcagaaccac ccgcaccttc ggggagagct ccaagtcctc ctatgagctt 1920
atcgtggtgg ctcacgacca cggcaagaca tctctctctg cctctgctct cgtcctaatc 1980
tacttgtccc ctgctctcga tgcccaagag tcaatgggct ctgtgaactt gtccttgatt 2040
ttcattattg ccctgggctc cattgcgggc atcctctttg taactatgat cttcgtggca 2100
atcaagtgca agcgagacaa caaagagatc cggacctaca actgcagtaa ttgtttaacc 2160
atcacttgtc tecteggetg ttttataaaa ggacaaaaca gcaagtgtet gcattgcate 2220
teggtttete ceattagega ggageaagae aaaaagaeag aggagaaagt gageetaagg 2280
ggaaagagaa ttgctgagta ctcctatggg catcaaaaga aatcaagcaa gaagaaaaaa 2340
atcagtaaga atgacatccg cctggtaccc cgggatgtgg aggagacaga caagatgaac 2400
gttgtcagtt gctcttccct gacctcctcc ctcaactatt ttgactacca ccagcagacg 2460
ctgcccctgg gctgccgccg ctctgagagc actttcctga atgtggagaa ccagaatacc 2520
cgcaacacca gtgctaacca catctaccat cactctttca acagccaggg gccccagcag 2580
cctgacctga ttatcaacgg tgtgcctctg cctgaggtga gtgcagctaa gtggctctgt 2640
                                                                  2667
gaggttctcc caggtctcct tctttag
```

<210> 12

<211> 2568

<212> DNA

<213> Homo sapiens

## <400> 12

atggagtcgc teetgetgcc ggtgetgetg etgetggca tactgtggac geaggetgcc 60 geectcatta ateteaagta eteggtagaa gaggagcage gegeegggac ggtgattgee 120 aacgtggca aagacgegg agaggeggc tteggetgg acceeggga ggetteagee 180 tttegegtgg tgtecaacte ggetecacac etagtggaca teaateecag etetggeetg 240 etggteacea ageagaagat tgacegtgat etgetgtge geeagagee eaagtgeate 300 atetegeteg aggteatgte eageteaatg gaaatetgeg tgataaaggt ggagateaag 360 gacetgaacg acaatgegee eagtteecg geageacaga tegagetgga gateteggag 420 geageagee etggeaegg eateeegge gacageett aegateeaga eteaggage 480 tttggegtge agaettaega geteaegee aacgagett teggeetgga gateaagaeg 540 egggegaeg geteeegett tgeegaacte gtggtggaaa agageetgga eegegagaeg 600 eagtegeact acagetteeg aateaetgeg etagaeggt gegaeeegee gegeetggge 660 aeegttggee ttagtateaa ggtgaeegae teeaatgaea acaaeeeggt gtttagegag 720 teeaeetaeg ateeagaeg ggeaeeaae tegeeteeaa acaaeeeggt eateegete 780 aaeggeeag ateeagaeg agggaeeeaae ggeeaggtgg tetaeteett etatggetae 840

```
gtcaacgacc gcacgegega gctctttcag atcgaccege acagtggeet ggtcactgtc 900
actggcgctt tagactacga agaggggcac gtgtacgaac tggacgtgca ggctaaggac 960
ttggggccca attccatccc ggcacactgc aaggtcaccg tcagcgtgct ggacaccaat 1020
gacaatccgc cggtcatcaa cctgctgtca gtcaacagtg agcttgtgga ggtcagcgag 1080
agegeeece egggetaegt gategeettg gtgegggtgt etgategega eteaggeete 1140
aatggacgtg tgcagtgccg tttgctgggc aatgtgccct ttcgactgca ggaatatgag 1200
agetteteca etattetggt ggaeggaegg etggaeegeg ageageaega eeaataeaae 1260
ctcacaattc aggcacgcga cggcggcgtg cccatgctgc agagtgccaa gtcctttacc 1320
gtgctcatca ctgacgaaaa tgacaaccac ccgcactttt ccaagcccta ctaccaggtc 1380
attgtgcagg agaacaacac gcctggcgcc tatctgctct ctgtgtctgc tcgcgacccc 1440
gacctgggtc tcaacggcag tgtctcctac cagatcgtgc cgtcgcaggt gcgggacatg 1500
cctgtcttca cctatgtctc catcaatccc aactcaggcg acatctacgc gctgcgatcc 1560
tttaaccacg agcagaccaa ggcgttcgaa ttcaaggtgc tggccaagga cggcggcctt 1620
ccctcactgc aaagcaacgc tacggtgcgg gtcatcatcc tcgacgtcaa cgacaacacc 1680
ccggtcatca cagccccacc tctgattaac ggcactgccg aggtctacat accccgcaac 1740
tctggcatag gctacctggt gactgttgtc aaggcagaag actacgatga gggcgaaaat 1800
ggccgagtca cctacgacat gaccgagggc gaccgcggct tctttgaaat agaccaggtc 1860
aatggcgaag tcagaaccac ccgcaccttc ggggagagct ccaagtcctc ctatgagctt 1920
atcgtggtgg ctcacgacca cggcaagaca tctctctctg cctctgctct cgtcctaatc 1980
tacttgtccc ctgctctcga tgcccaagag tcaatgggct ctgtgaactt gtccttgatt 2040
ttcattattg ccctgggctc cattgcgggc atcctctttg taactatgat cttcgtggca 2100
atcaagtgca agcgagacaa caaagagatc cggacctaca actgcagaat tgctgagtac 2160
tcctatgggc atcaaaagaa atcaagcaag aagaaaaaaa tcagtaagaa tgacatccgc 2220
ctggtacccc gggatgtgga ggagacagac aagatgaacg ttgtcagttg ctcttccctg 2280
acctectece teaactattt tgaetaceae eageagaege tgeecetggg etgeegeege 2340
totgagagca otttootgaa tgtggagaac cagaatacco gcaacaccag tgotaaccac 2400
atctaccatc actctttcaa cagccagggg ccccagcagc ctgacctgat tatcaacggt 2460
gtgcctctgc ctgagactga aaactattct tttgactcca actacgtgaa tagccgagcc 2520
                                                                  2568
catttaatca agaggtatgt tggtttgctt gcttattgct gcaactaa
```

```
<210> 13
<211> 990
<212> DNA
```

<213> Homo sapiens

```
atggtgacga aggcctttgt cttgttggcc atcttgcag aagcctctgc aaaatcgtgt 60 gctccaaata aagcagatgt cattcttgtg ttttgctatc ccaaaaccat catcaccaaa 120 atccccgagt gtccctatgg atgggaagtt catcagctgg ccctcggagg gctgtgttac 180 aatggggtcc acgaaggagg ttactaccaa tttgtgatcc cagatttatc acctaaaaac 240
```

```
aagteetatt gtggaaceea gtetgagtae aageeaceta tetateaett etacagteae 300
atogtttcca atgacaccac agtgattgta aaaaaccagc ctgtcaacta ctccttctcc 360
tgcacctacc actccaccta cttggtgaac caggctgcct ttgaccagag agtggccact 420
gttcacgtga agaacgggag catgggcaca tttgagagcc aactgtctct caacttctac 480
actaatgcca agtteteeat caagaaagaa geteeetttg teetggagge ateegaaate 540
ggttcagatc tgtttgcagg agtggaagcc aaagggttaa gcattaggtt taaagtggtc 600
ttgaacaget gttgggecae eeectegget gaetteatgt ateeettgea gtggeagetg 660
atcaacaagg getgeeceae ggatgaaace gteetegtge atgagaatgg gagagateae 720
agggcaacct tecaatteaa tgettteegg ttecagaaca teeceaaact etecaaggtg 780
tggttacact gtgagacgtt catctgcgac agtgagaaac tctcctgccc agtgacctgc 840
gataaacgga agcgcctcct gcgagaccag accgggggag tcctggtcgt ggagctctcc 900
ctgcggagca ggggattttc cagtctctat agcttctcag atgttctcca ccacctcatc 960
                                                                  990
atgatgttgg ggatttgtgc cgtgttatag
<210> 14
<211> 699
<212> DNA
<213> Homo sapiens
<400> 14
atgetetaca caaggaaaaa cetgacetge geacaaacea teaacteete agettttggg 60
aacttgaatg tgaccaagaa aaccaccttc attgtccatg gattcaggcc aacaggctcc 120
cctcctgttt ggatggatga cttagtaaag ggtttgctct ctgttgaaga catgaacgta 180
gttgttgttg attggaatcg aggagctaca actttaatat atacccatgc ctctagtaag 240
accagaaaag tagccatggt cttgaaggaa tttattgacc agatgttggc agaaggagct 300
totottgatg acatttacat gatoggagta agtotaggag cocacatato tgggtttgtt 360
ggagagatgt acgatggatg gctggggaga attacaggcc tcgaccctgc aggcccttta 420
ttcaacggga aacctcacca agacagatta gatcccagtg atgcgcagtt tgttgatgtc 480
atcoattccg acactgatgg taacgctcct ttccttgtgg cactgggcta caaggagcca 540
ttaggaaaca tagacttcta cccaaatgga ggattggatc aacctggctg ccccaaaaca 600
atattgggag gaaatgttaa ggaaatgata caggcttcct atatcttttt ccttaaaaac 660
                                                                  699
gactctatgg acttaagttc accgaaggaa gtggaatga
<210> 15
<211> 1359
<212> DNA
```

<400> 15 atgttgagat tetaettatt cateagtttg ttgtgettgt caagateaga egeagaagaa 60

<213> Homo sapiens

```
acatgteett catteaceag getgagettt caeagtgeag tggttggtae gggaetaaat 120
gtgaggctga tgctctacac aaggaaaaac ctgacctgcg cacaaaccat caactcctca 180
gcttttggga acttgaatgt gaccaagaaa accaccttca ttgtccatgg attcaggcca 240
acaggetece etectgittg gatggatgae tragtaaagg gittgetete tgitgaagae 300
atgaacgtag ttgttgttga ttggaatcga ggagctacaa ctttaatata tacccatgcc 360
tctagtaaga ccagaaaagt agccatggtc ttgaaggaat ttattgacca gatgttggca 420
gaaggagctt ctcttgatga catttacatg atcggagtaa gtctaggagc ccacatatct 480
gggtttgttg gagagatgta cgatggatgg ctggggagaa ttacaggcct cgaccctgca 540
ggccctttat tcaacgggaa acctcaccaa gacagattag atcccagtga tgcgcagttt 600
gttgatgtca tccattccga cactgatgca ctgggctaca aggagccatt aggaaacata 660
gacttctacc caaatggagg attggatcaa cctggctgcc ccaaaacaat attgggagga 720
tttcagtatt ttaaatgtga ccaccagagg tctgtatacc tgtacctgtc ttccctgaga 780
gagagetgea ceateactge gtatecetgt gaetectace aggattatag gaatggeaag 840
tgtgtcagct gcggcacgtc acaaaaagag tcctgtcccc ttctgggcta ttatgctgat 900
aattggaaag accatctaag ggggaaagat cctccaatga cgaaggcatt ctttgacaca 960
gctgaggaga gcccattctg catgtatcat tactttgtgg atattataac atgggacaag 1020
aatgtaagaa gaggggacat taccatcaaa ttgagagaca aagctggaaa cacccacaga 1080
tccaaaatca tcagtaatga acccaccaca tttcagaaat atcaccaagt gagtctactt 1140
gcaagattta atcaagatct ggataaagtg gctgcaattt ccttgatgtt ctctacagga 1200
tctctaatag gcccaaggta caagctcagg attctccgaa tgaagttaag gtcccttgcc 1260
catccggaga ggcctcagct gtgtcggtat gatcttgtcc tgatggaaaa cgttgaaaca 1320
                                                                  1359
gtcttccaac ctattctttg cccagagttg cagttgtaa
```

<210> 16 <211> 1353 <212> DNA <213> Homo sapiens

```
atggggetce ggagecacca ecteagectg ggeettetge ttetgtttet acteetgea 60 gagtgeetgg gagetgagg eeggetgget eteaagetgt teegtgaeet etttgeeaac 120 tacacaagtg ecetgagaec tgtggeagae acagaccaga etetgaatgt gaecetggag 180 gtgaeactgt eceagateat egacatggat gaacggaace aggtgetgae eetgtatetg 240 tggatacgge aggagtggae agatgeetae etaegatggg aceceaatge etatggtgge 300 etggatgea teegeatee eagetett gtgtggege eagacategt actetataac 360 aaageegaeg egeageete aggteege ageaceacg tggteetge eeaegatgge 420 geegtgegt gggaegeee etgeggeetg aegteege geegegtga tgtageagee 540 eaactggatg tgeegeege eggegetgea geeageetg eggaettegt ggagaacgtg 600 gagtggeeg tgetggeat geeggegg eggegegtge teaeetaeg etgetgetee 660
```

```
tgcaacctgc tgctgccctg cgtgctcatc tcgctgcttg cgccgctcgc cttccacctg 780
cctgccgact caggcgagaa ggtgtcgctg ggcgtcaccg tgctgctggc gctcaccgtc 840
ttccagttgc tgctggccga gagcatgcca ccggccgaga gcgtgccgct catcgggaag 900
tactacatgg ccactatgac catggtcaca ttctcaacag cactcaccat ccttatcatg 960
aacctgcatt actgtggtcc cagtgtccgc ccagtgccag cctgggctag ggccctcctg 1020
ctgggacacc tggcacgggg cctgtgcgtg cgggaaagag gggagccctg tgggcagtcc 1080
aggecacetg agttatetee tageceecag tegeetgaag gaggggetgg ecceecageg 1140
ggcccttgcc acgagccacg atgtctgtgc cgccaggaag ccctactgca ccacgtagcc 1200
accattgcca ataccttccg cagccaccga gctgcccagc gctgccatga ggactggaag 1260
cgcctggccc gtgtgatgga ccgcttcttc ctggccatct tcttctccat ggccctggtc 1320
                                                                1353
atgageetee tggtgetggt geaggeeetg tga
<210> 17
<211> 768
<212> DNA
<213> Homo sapiens
<400> 17
atggttaagg gtgagaaagg ccccaagggc aagaagatca ccctcaaggt ggccaggaat 60
tgcatcaaaa tcacttttga tgggaaaaag cgccttgact tgagcaagat gggaattacc 120
accttcccca agtgtattct gcgccttagt gacatggacg agctggacct tagccggaat 180
cttatcagga agatccctga ctccatctcc aagttccaga acctccggtg gctggacctg 240
cacagcaact acatagacaa gctgcctgag tccattggcc agatgaccag cctgctctac 300
ctcaacgtca gcaacaaccg gctgaccagc aacgggctgc ccgtggagct gaagcaactc 360
aagaacatcc gcgctgtgaa cctaggcttg aaccacctgg acagcgtgcc caccacactg 420
ggggccctga aggagctcca cgaggtaggg ctccatgaca acctactgaa caacatcccc 480
gtgagcatct ccaagctccc caagctgaaa aagctcaaca taaagcggaa cccctttcca 540
aagccaggtg agtcggaaat attcatagac tccatcagga ggctggagaa cttgtatgtt 600
gtggaggaga aggatetgtg tgeggettge etgagaaaat geeaaaaege eegggacaae 660
ctgaatagaa tcaagaacat ggccacgacg acaccgagaa agaccatett teccaatetg 720
                                                                768
atctcaccca attccatggc caaggactcc tgggaagact ggaggtga
<210> 18
<211> 645
<212> DNA
<213> Homo sapiens
<400> 18
```

atgcaggcag gaactcagtc aacgcatgag tototgaagc ctcagagggt acaatttcag 60

```
tcccgaaatt ttcacaacat tttgcaatgg cagcctggga gggcacttac tggcaacagc 120
agtgtctatt ttgtgcagta caaaatatat ggacagagac aatggaaaaa taaagaagac 180
tgttggggta ctcaagaact ctcttgtgac cttaccagtg aaacctcaga catacaggaa 240
ccttattacg ggagggtgag ggcggcctcg gctgggagct actcagaatg gagcatgacg 300
ccgcggttca ctccctggtg ggaaacaaaa atagatcctc cagtcatgaa tataacccaa 360
gtcaatggct ctttgttggt aattctccat gctccaaatt taccatatag ataccaaaag 420
gaaaaaaatg tatctataga agattactat gaactactat accgagtttt tataattaac 480
aattcactag aaaaggagca aaaggtttat gaaggggctc acagagcggt tgaaattgaa 540
gctctaacac cacactccag ctactgtgta gtggctgaaa tatatcagcc catgttagac 600
                                                                   645
agaagaagtc agagaagtga agagagatgt gtggaaattc catga
<210> 19
<211> 696
<212> DNA
<213> Homo sapiens
<400> 19
atgatgccta aacattgctt tctaggcttc ctcatcagtt tcttccttac tggtgtagca 60
ggaactcagt caacgcatga gtctctgaag cctcagaggg tacaatttca gtcccgaaat 120
tttcacaaca ttttgcaatg gcagcctggg agggcactta ctggcaacag cagtgtctat 180
tttgtgcagt acaaaatata tggacagaga caatggaaaa ataaagaaga ctgttggggt 240
actcaagaac tetettgtga eettaceagt gaaaceteag acatacagga acettattae 300
gggagggtga gggcggcctc ggctgggagc tactcagaat ggagcatgac gccgcggttc 360
actccctggt gggaaacaaa aatagatcct ccagtcatga atataaccca agtcaatggc 420
tctttgttgg taattctcca tgctccaaat ttaccatata gataccaaaa ggaaaaaaat 480
gtatctatag aagattacta tgaactacta taccgagttt ttataattaa caattcacta 540 _{\scriptscriptstyle /}
gaaaaggagc aaaaggttta tgaaggggct cacagagcgg ttgaaattga agctctaaca 600
ccacactcca gctactgtgt agtggctgaa atatatcagc ccatgttaga cagaagaagt 660
                                                                    696
cagagaagtg aagagagatg tgtggaaatt ccatga
<210> 20
<211> 792
<212> DNA
<213> Homo sapiens
<400> 20
atgatgccta aacattgctt tctaggcttc ctcatcagtt tcttccttac tggtgtagca 60
ggaactcagt caacgcatga gtctctgaag cctcagaggg tacaatttca gtcccgaaat 120
tttcacaaca ttttgcaatg gcagcctggg agggcactta ctggcaacag cagtgtctat 180
tttgtgcagt acaaaatcat gttctcatgc agcatgaaaa gctctcacca gaagccaagt 240
```

```
ggatgctggc agcacatttc ttgtaacttc ccaggctgca gaacattggc taaatatgga 300 cagagacaat ggaaaaataa agaagactgt tggggtactc aagaactctc ttgtgacctt 360 accagtgaaa cctcagacat acaggaacct tattacggga gggtgagggc ggcctcggct 420 ggagagctact cagaatggag catgacgccg cggttcactc cctggtggga aacaaaaata 480 gatcctccag tcatgaatat aacccaagtc aatggctctt tgttggtaat tctccatgct 540 ccaaatttac catatagata ccaaaaaggaa aaaaatgtat ctatagaaga ttactatgaa 600 ctactatacc gagttttat aattaacaat tcactagaaa aggagcaaaa ggtttatgaa 660 ggggctcaca gagcggttga aattgaagct ctaacaccac actccagcta ctgtgtagtg 720 gctgaaatat atcagcccat gttagacaga agaagtcaga gaagtgaaga gagatgtgt 780 gaaattccat ga
```

<210> 21

<211> 780

<212> DNA

<213> Homo sapiens

#### <400> 21

atgtatgtat tatctccagt ggaatttata attctacaac ttttattat tcaggccatt 60 tccagcagtt taaaaggttt cctttcagct atgagactgg ctcatagagg ctgtaatgtt 120 gatacaccag tttcaacgct cacaccagtg aagacttcag aatttgaaaa ctttaaaact 180 aaaatggtta tcacatccaa aaaagactat cctctaagta agaattttcc atattccttg 240 gaacatcttc agacttctta ctgtgggctt gtccgagttg atatgcgtat gctttgctta 300 aaaagcctta ggaaattaga cttgagtcac aaccatataa aaaagcttcc agctacaatt 360 ggagacctca tacaccttca agaacttaac ctgaatgaca atcacttgga gtcatttagt 420 gtagccttgt gtcattctac actccagaag tcacttcgga gtttggacct cagcaagaac 480 aaaatcaagg cactccctgt gcagtttgc cagctccagg aacttaagaa tttaaaactt 540 gacgataatg aattgatca atttccttgc aagataggac aacttaagaa tttaacactt 540 ttgtcagcag ctcgaaataa gcttccattt ttgcctagtg aatttagaaa tttatccctt 660 gaatacttgg atctttttgg aaatacttt gaacaaccaa aagtcctcc agaataaaa 720 ctgcaagcac cattaactt attggaatct tctgcacgaa ccatattaca taataggtaa 780

<210> 22

<211> 1251

<212> DNA

<213> Homo sapiens

## <400> 22

atgaagctac actgtgaggt ggaggtgatc agccggcact tgcccgcctt ggggcttagg 60 aaccggggca agggcgtccg agccgtgttg agcctctgtc agcagacttc caggagtcag 120

```
ccgccgqtcc gagccttcct gctcatctcc accctgaagg acaagcgcgg gacccgctat 180
qaqctaaqqq aqaacattqa qcaattcttc accaaatttq tagatgaggg gaaaqccact 240
gttcggttaa aggagcctcc tgtggatatc tgtctaagtà aggccatttc cagcagttta 300
aaaggtttcc tttcagctat gagactggct catagaggct gtaatgttga tacaccagtt 360
tcaacqctca caccagtgaa gacttcagaa tttgaaaact ttaaaactaa aatggttatc 420
acatccaaaa aagactatcc tctaagtaag aattttccat attccttgga acatcttcag 480
acttettact gtgggettgt eegagttgat atgegtatge tttgettaaa aageettagg 540
aaattagact tgagtcacaa ccatataaaa aagcttccag ctacaattgg agacctcata 600
caccttcaag aacttaacct gaatgacaat cacttggagt catttagtgt agccttgtgt 660
cattctacac tccagaagtc acttcggagt ttggacctca gcaagaacaa aatcaaggca 720
ctccctqtqc aqttttqcca qctccaqqaa cttaaqaatt taaaacttga cgataatgaa 780
ttgattcaat ttccttgcaa gataggacaa ctaataaacc ttcgcttttt gtcagcagct 840
cqaaataaqc ttccattttt gcctagtgaa tttagaaatt tatcccttga atacttggat 900
ctttttggaa atacttttga acaaccaaaa gtccttccag taataaagct gcaagcacca 960
ttaactttat tggaatcttc tgcacgaacc atattacata ataggaatag gattccatat 1020
qqctctcata tcattccatt ccatctctgc caagatttgg ataccgcaaa aatttgtgtt 1080
tgtggaagat tctgtctgaa ctctttcatt caaggaacta ctaccatgaa tctgcattct 1140
gttgcccaca ctgtggtctt agtagataat ttgggtggta ctgaagcacc tattatctct 1200
tatttctgtt ctctaggctg ttatgttaat tcctctgata tgttaaagta a
                                                                  1251
```

<210> 23

<211> 461

<212> PRT

<213> Homo sapiens

### <400> 23

Met Leu Gly Ile Trp Ile Val Ala Phe Leu Phe Phe Gly Thr Ser Arg 15 5 1 0 1 Gly Lys Glu Val Cys Tyr Glu Arg Leu Gly Cys Phe Lys Asp Gly Leu 25 Pro Trp Thr Arg Thr Phe Ser Thr Glu Leu Val Gly Leu Pro Trp Ser 45 40 Pro Glu Lys Ile Asn Thr Arg Phe Leu Leu Tyr Thr Ile His Asn Pro 55 60 Asn Ala Tyr Gln Glu Ile Ser Ala Val Asn Ser Ser Thr Ile Gln Ala 75 65 Ser Tyr Phe Gly Thr Asp Lys Ile Thr Arg Ile Asn Ile Ala Gly Trp 90 85 Lys Thr Asp Gly Lys Trp Gln Arg Asp Met Cys Asn Val Leu Leu Gln 105 110 100

	Leu	Glu	Asp 115	Ile	Asn	Cys	Ile	Asn 120	Leu	Asp	Trp	Ile	Asn 125	Gly	Ser	Arg
	Glu	Tyr 130	Ile	His	Ala	Val	Asn 135	Asn	Leu	Arg	Val	Val 140	Gly	Ala	Glu	Val
	Ala 145	Tyr	Phe	Ile	Asp	Val 150	Leu	Met	Lys	Lys	Phe 155	Glu	Tyr	Ser	Pro	Ser 160
	Lys	Val	His	Leu	Ile 165	Gly	His	Ser	Leu	Gly 170	Ala	His	Leu	Ala	Gly 175	Glu
	Ala	Gly	Ser	Arg 180	Ile	Pro	Gly	Leu	Gly 185	Arg	Ile	Thr	Gly	Leu 190	Asp	Pro
	Ala	Gly	Pro 195	Phe	Phe	His	Asn	Thr 200	Pro	Lys	Glu	Val	Arg 205	Leu	Asp	Pro
	Ser	Asp 210	Ala	Asn	Phe	Val	Asp 215	Val	Ile	His	Thr	Asn 220	Ala	Ala	Arg	Ile
,	Leu	Phe	Glu	Leu	Gly	Val	Gly	Thr	Ile	Asp	Ala	Cys	Gly	His	Leu	Asp
	225					230					235					240
	Phe	Tyr	Pro	Asn	Gly	Gly	Lys	His	Met	Pro	Gly	Cys	Glu	Asp	Leu	Ile
					245					250					255	
	Thr	Pro	Leu	Leu	Lys	Phe	Asn	Phe	Asn	Ala	Tyr	Lys	Lys	Glu	Met	Ala
				260					265					270		
	Ser	Phe	Phe 275	Asp	Cys	Asn	His	Ala 280	Arg	Ser	Tyr	Gln	Phe 285	Tyr	Ala	Glu
	Ser	Ile	Leu	Asn	Pro	Asp	Ala	Phe	Ile	Ala	Tyr	Pro	Cys	Arg	Ser	Tyr
		290					295					300				
	Thr	Ser	Phe	Lys	Ala	Gly	Thr	Cys	Val	Gly	Cys	Ala	Asp	Leu	Leu	His
	305					310					315					320
	Arg	Ile	Asp	Lys	Ile 325	Gly	Ser	His	Thr	Ser 330	His	Val	Phe	Leu	Thr 335	Leu
	Ser	Leu	Pro	Phe 340	Leu	Leu	Val	Ser	Leu 345	Tyr	Leu	Gly	Trp	Arg 350	His	Lys
	Leu	Ser	Val 355	Lys	Leu	Ser	Gly	Ser 360	Glu	Val	Thr	Gln	Gly 365	Thr	Val	Phe
	Leu	Arg 370	Val	Gly	Gly	Ala	Val 375	Arg	Lys	Thr	Gly	Glu 380	Phe	Ala	Ile	Val
	Ser	Gly	Lys	Leu	Glu	Pro	Gly	Met	Thr	Tyr	Thr	Lys	Leu	Ile	Asp	Ala
	385	-	-			390					395					400
	Asp	Val	Asn	Val	Gly	Asn	Ile	Thr	Ser	Val	Gln	Phe	Ile	Trp	Lys	Lys
					405					410					415	
	His	Leu	Phe	Glu	Asp	Ser	Gln	Asn	Lys	Leu	Gly	Ala	Glu	Met	Val	Ile
				420		,			425					430		

Asn Thr Ser Gly Lys Tyr Gly Tyr Lys Ser Thr Phe Cys Ser Gln Asp 435 440 445

Ile Met Gly Pro Asn Ile Leu Gln Asn Leu Lys Pro Cys 450 455 460

<210> 24 <211> 308 <212> PRT <213> Homo sapiens

<400> 24 Met Pro Phe Leu Gln Leu Lys Gly Arg Ala Thr Pro Pro Ser Trp Arg His Asp Ser Arg Ser Leu Val His Leu Leu Asp Gly Lys Glu Gly Val 25 Trp Asp Thr Thr Gly Tyr Ala Leu Gly Ser Arg Glu Ser Leu Asn Pro Asp Met Gly Ile Gly Asp Pro His Gly His Ser Thr Val His Thr Arg 55 Glu Ala Gly Thr Ala Cys Pro Leu Gln Leu Leu Gly Ala Arg Glu Ala 75 70 Ser Leu Leu Ala Cys Gly Ile Cys Gln Ala Ser Gly Gln Ile Phe Ile 90 Thr Gln Thr Leu Gly Ile Lys Gly Tyr Arg Thr Val Val Ala Leu Asp 105 Lys Val Pro Glu Asp Val Gln Glu Tyr Ser Trp Tyr Trp Gly Ala Asn 125 115 Asp Ser Ala Gly Asn Met Ile Ile Ser His Lys Pro Pro Ser Ala Gln 135 Gln Pro Gly Pro Met Tyr Thr Gly Arg Glu Arg Val Asn Arg Glu Gly 155 150 145 Ser Leu Leu Ile Arg Pro Thr Ala Leu Asn Asp Thr Gly Asn Tyr Thr 170 165 Val Arg Val Val Ala Gly Asn Glu Thr Gln Arg Ala Thr Gly Trp Leu 185 180 Glu Val Leu Asp Gly Pro Asp Tyr Val Leu Leu Arg Ser Asn Pro Asp 205 200 Asp Phe Asn Gly Ile Val Thr Ala Glu Ile Gly Ser Gln Val Glu Met 220 210 215

Glu Cys Ile Cys Tyr Ser Phe Leu Asp Leu Lys Tyr His Trp Ile His 235 225 230 Asn Gly Ser Leu Leu Asn Phe Ser Asp Ala Lys Met Asn Leu Ser Ser 250 245 Leu Ala Trp Glu Gln Met Gly Arg Tyr Arg Cys Thr Val Glu Asn Pro 270 265 Val Thr Gln Leu Ile Met Tyr Met Asp Val Arg Ile Gln Ala Pro His 280 285 275 Glu Cys Ser Ser Ser Pro Pro Gly Ser Cys Phe Ala His Leu Pro Ala 295 300 Ser Met Pro Cys 305 <210> 25 <211> 457 <212> PRT <213> Homo sapiens <400> 25 Met Asp Leu Ser Arg Pro Arg Trp Ser Leu Trp Arg Arg Val Phe Leu Met Ala Ser Leu Leu Ala Cys Gly Ile Cys Gln Ala Ser Gly Gln Ile 30 25 Phe Ile Thr Gln Thr Leu Gly Ile Lys Gly Tyr Arg Thr Val Val Ala 40

Leu Asp Lys Val Pro Glu Asp Val Gln Glu Tyr Ser Trp Tyr Trp Gly 55 Ala Asn Asp Ser Ala Gly Asn Met Ile Ile Ser His Lys Pro Pro Ser 75 70 Ala Gln Gln Pro Gly Pro Met Tyr Thr Gly Arg Glu Arg Val Asn Arg 90 Glu Gly Ser Leu Leu Ile Arg Pro Thr Ala Leu Asn Asp Thr Gly Asn 110 105 Tyr Thr Val Arg Val Val Ala Gly Asn Glu Thr Gln Arg Ala Thr Gly 120 115 Trp Leu Glu Val Leu Glu Leu Gly Ser Asn Leu Gly Ile Ser Val Asn 140 135 130 Ala Ser Ser Leu Val Glu Asn Met Asp Ser Val Ala Ala Asp Cys Leu 155 160 150

Thr	Asn	Val	Thr		Ile	Thr	Trp	Tyr		Asn	Asp	Val	Pro		Ser
				165					170					175	
Ser	Ser	Asp	Arg	Met	Thr	Ile	Ser	Pro	Asp	Gly	Lys	Thr	Leu	Val	Ile
			180					185					190		
Leu	Arg	Val	Ser	Arg	Tyr	Asp	Arg	Thr	Ile	Gln	Cys	Met	Ile	Glu	Ser
		195					200					205			
Phe	Pro	Glu	Ile	Phe	Gln	Arg	Ser	Glu	Arg	Ile	Ser	Leu	Thr	Val	Ala
	210					215					220				
Tyr	Gly	Pro	Asp	Tyr	Val	Leu	Leu	Arg	Ser	Asn	Pro	Asp	Asp	Phe	Asn
225					230					235					240
Gly	Ile	Val	Thr	Ala	Glu	Ile	Gly	Ser	Gln	Val	Glu	Met	Glu	Cys	Ile
				245					250					255	
Cys	Tyr	Ser	Phe	Leu	Asp	Leu	Lys	Tyr	His	Trp	Ile	His	Asn	Gly	Ser
			260					265					270		
Leu	Leu	Asn	Phe	Ser	Asp	Ala	Lys	Met	Asn	Leu	Ser	Ser	Leu	Ala	Trp
		275					280					285			
Glu	Gln	Met	Gly	Arg	Tyr	Arg	Cys	Thr	Val	Glu	Asn	Pro	Val	Thr	Gln
	290					295					300				
Leu	Ile	Met	Tyr	Met	Asp	Val	Arg	Ile	Gln	Ala	Pro	His	Glu	Cys	Pro
305					310					315					320
Leu	Pro	Ser	Gly	Ile	Leu	Pro	Val	Val	His	Arg	Asp	Phe	Ser	Ile	Ser
				325					330					335	
Gly	Ser	Met	Val	Met	Phe	Leu	Ile	Met	Leu	Thr	Val	Leu	Gly	Gly	Val
			340					345					350		
Tyr	Ile	Cys	Gly	Val	Leu	Ile	His	Ala	Leu	Ile	Asn	His	Tyr	Ser	Ile
		355					360					365			
Arg	Cys	Pro	His	Cys	Ser	Gly	Thr	Arg	Val	Gly	Cys	Trp	Leu	Gly	Ala
	370					375					380				
Gly	Thr	Gln	Glu	Pro	Ala	Leu	Pro	Pro	Glu	Gly	Lys	Gln	Ser	Gln	Lys
385					390					395					400
Gly	Arg	Asp	Lys	Pro	Gly	Thr	Arg	Leu	Ser	Gly	Ile	Ile	Trp	Gly	Arg
				405					410					415	
Gln	Ile	Ser	Pro	Gln	Asp	Leu	Lys	Leu	Met	Gly	Ala	Arg	Glu	Gly	Leu
			420					425					430		
Glu	Ser	Ala	Met	Val	Leu	Asn	Ser	Cys	Gly	Val	Ser	Ser	Ser	Asn	Phe
		435					440					445			
Pro	Ser	Leu	Cys	Val	Tyr	Lys	Gly	Tyr							
	450					455									

```
<210> 26
<211> 704
<212> PRT .
<213> Homo sapiens
М
Le
A.
L
Α
Pl
G
S
```

<400	> 26	i													
Met 1	Leu	His	Asp	Gly. 5	Leu	Thr	Ala	Pro	Asp 10	Gly	Cys	Gly	Ile	Tyr 15	Ser
Leu	Thr	Gly	Arg 20	Glu	Val	Leu	Thr	Pro 25	Phe	Pro	Gly	Leu	Gly 30	Thr	Ala
Ala	Ala	Pro 35	Ala	Gln	Gly	Gly	Ala 40	His	Leu	Lys	Gln	Cys 45	Asp	Leu	Leu
Lys	Leu 50	Ser	Arg	Arg	Gln	Lys 55	Gln	Leu	Cys	Arg	Arg 60	Glu	Pro	Gly	Leu
Ala 65	Glu	Thr	Leu	Arg	Asp 70	Ala	Ala	His	Leu	Gly 75	Leu	Leu	Glu	Cys	Gln 80
Phe	Gln	Phe	Arg	His 85	Glu	Arg	Trp	Asn	Cys 90	Ser	Leu	Glu	Gly	Arg 95	Met
Gly	Leu	Leu	Lys 100	Arg	Gly	Phe	Lys	Glu 105	Thr	Ala	Phe	Leu	Tyr 110	Ala	Val
Ser	Ser	Ala 115	Ala	Leu	Thr	His	Thr 120	Leu	Ala	Arg	Ala	Cys 125	Ser	Ala	Gly
Arg	Met 130	Glu	Arg	Cys	Thr	Cys 135	Asp	Asp	Ser	Pro	Gly 140	Leu	Glu	Ser	Arg
Gln 145	Ala	Trp	Gln	Trp	Gly 150	Val	Cys	Gly	Asp	Asn 155	Leu	Lys	Tyr	Ser	Thr 160
Lys	Phe	Leu	Ser	Asn 165	Phe	Leu	Gly	Ser	Lys 170	Arg	Gly	Asn	Lys	Asp 175	Leu
Arg	Ala	Arg	Ala 180	Asp	Ala	His	Asn	Thr 185	His	Val	Gly	Ile	Lys 190	Ala	Val
Lys	Ser	Gly 195	Leu	Arg	Thr	Thr	Cys 200	Lys	Cys	His	Gly	Val 205	Ser	Gly	Ser
Cys	Ala 210	Val	Arg	Thr	Cys	Trp 215	Lys	Gln	Leu	Ser	Pro 220	Phe	Arg	Glu	Thr
Gly 225	Gln	Val	Leu	Lys	Leu 230	Arg	Tyr	Asp	Ser	Ala 235	Val	Lys	Val	Ser	Ser 240
Ala	Thr	Asn	Glu	Ala 245	Leu	Gly	Arg	Leu	Glu 250	Leu	Trp	Ala	Pro	Ala 255	Arg
Gln	Gly	Ser	Leu 260	Thr	Lys	Gly	Leu	Ala 265	Pro	Arg	Ser	Gly	Asp 270	Leu	Val

Tyr	Met	Glu 275	Asp	Ser	Pro	Ser	Phe 280	Cys	Arg	Pro	Ser	Lys 285	Tyr	Ser	Pro
Gly	Thr 290	Ala	Gly	Arg	Val	Cys 295	Ser	Arg	Glu	Ala	Ser 300	Cys	Ser	Ser	Leu
Cys	Cys	Gly	Arg	Gly	Tyr	Asp	Thr	Gln	Ser	Arg	Leu	Val	Ala	Phe	Ser
305					310					315					320
Cys	His	Cys	Gln	Val	Gln	Trp	Cys	Cys	Tyr	Val	Glu	Cys	Gln	Gln	Cys
				325					330					335	
Val	Gln	Glu	Glu	Leu	Val	Tyr	Thr	Cys	Lys	His	Ala	Met	Gly	Pro	Val
			340					345					350		
Gly	Phe	Pro	Arg	Gln	Cys	Gln	Gly	Ala	Phe	Phe	Glu	Ser	Ser	Pro	Gly
		355					360					365			
Gln	Thr	Arg	Ala	Arg	Leu	Thr	Gly	Arg	Glu	Val	Leu	Thr	Pro	Phe	Pro
	370					375					380				
Gly	Leu	Gly	Thr	Ala		Ala	Pro	Ala	Gln		Gly	Ala	His	Leu	
385					390					395					400
Gln	Cys	Asp	Leu	Leu	Lys	Leu	Ser	Arg		Gln	Lys	Gln	Leu		Arg
				405					410					415	
Arg	Glu	Pro	Gly	Leu	Ala	Glu	Thr		Arg	Asp	Ala	Ala		Leu	GLy
			420					425					430		_
Leu	Leu		Cys	Gln	Phe	Gln		Arg	His	Glu	Arg		Asn	Cys	Ser
		435					440	_	_			445			- 1
Leu		Gly	Arg	Met	GLY		Leu	Lys	Arg	GLY		ьуs	GLU	Thr	Ата
	450	_			_	455		- 1	-	m\	460	m1	T	707 -	7)
	Leu	Tyr	Ala	Val		Ser	Ата	Ата	Leu		HIS	Inr	Leu	Ala	480
465		0	7.1.	G1	470	M - +	C1	7	C···	475	C	7 02	7 cn	Sor	
Ата	Cys	Ser	Ala		Arg	мес	GIU	Arg	490	1111	Cys	Asp	Asp	495	FIO
C1	T	C1	Ser	485	Cln	71-	Trn	Cln		C1 v	Wal	Cue	Glv		Δsn
GIY	ьeu	GIU	500	ALG	GIII	Ald	пр	505	пр	Gry	val	Cys	510	АЗР	ASII
Lou	Lvc	ጥላን	Ser	Thr	Luc	Pho	T.e.i		Δsn	Phe	Len	Glv		Lvs	Ara
ьеи	гуз	515	261	1111	БУЗ	rne	520	501	71511	1110	ВСС	525	501	2,0	111.9
Gly	Asn		Asp	T.e.u	Ara	Δla		Δla	Asp	Ala	His		Thr	His	Va l
OLY	530	Буб	тор	шец	71129	535	**** 9				540				
Glv		Lvs	Ala	Val	Lvs		Glv	Leu	Ara	Thr		Cvs	Lvs	Cvs	His
545					550		1		9	555		4	4	3	560
	Val	Ser	Gly	Ser		Ala	Val	Ara	Thr	Cvs	Trp	Lys	Gln	Leu	Ser
1			1	565	<i>a</i> -			,	570	-	•	•		575	
Pro	Phe	Ara	Glu		Gly	Gln	Val	Leu		Leu	Arg	Tyr	Asp	Ser	Ala
		,	580		-			585	-		_	-	590		

,

Val Lys Val Ser Ser Ala Thr Asn Glu Ala Leu Gly Arg Leu Glu Leu 600 595 Trp Ala Pro Ala Arg Gln Gly Ser Leu Thr Lys Gly Leu Ala Pro Arg 620 615 Ser Gly Asp Leu Val Tyr Met Glu Asp Ser Pro Ser Phe Cys Arg Pro 630 635 Ser Lys Tyr Ser Pro Gly Thr Ala Gly Arg Val Cys Ser Arg Glu Ala 645 Ser Cys Ser Ser Leu Cys Cys Gly Arg Gly Tyr Asp Thr Gln Ser Arg 665 660 Leu Val Ala Phe Ser Cys His Cys Gln Val Gln Trp Cys Cys Tyr Val 680 675 Glu Cys Gln Gln Cys Val Gln Glu Glu Leu Val Tyr Thr Cys Lys His 695

<210> 27

<211> 361

<212> PRT

<213> Homo sapiens

<400> 27

Met Lys Pro Leu Arg Arg Pro Leu Pro Phe Ile Cys Pro Ser Pro Pro 15 10 Ser Pro Arg Leu Thr Cys Leu Pro Pro Leu Ala Leu Ser Ser Leu Thr 25 Gly Arg Glu Val Leu Thr Pro Phe Pro Gly Leu Gly Thr Ala Ala Ala 40 Pro Ala Gln Gly Gly Ala His Leu Lys Gln Cys Asp Leu Leu Lys Leu 60 55 Ser Arg Arg Gln Lys Gln Leu Cys Arg Arg Glu Pro Gly Leu Ala Glu 75 Thr Leu Arg Asp Ala Ala His Leu Gly Leu Leu Glu Cys Gln Phe Gln 90 85 Phe Arg His Glu Arg Trp Asn Cys Ser Leu Glu Gly Arg Met Gly Leu 105 100 Leu Lys Arg Gly Phe Lys Glu Thr Ala Phe Leu Tyr Ala Val Ser Ser 125 120 115 Ala Ala Leu Thr His Thr Leu Ala Arg Ala Cys Ser Ala Gly Arg Met 140 135

Glu Arg Cys Thr Cys Asp Asp Ser Pro Gly Leu Glu Ser Arg Gln Ala 155 145 150 Trp Gln Trp Gly Val Cys Gly Asp Asn Leu Lys Tyr Ser Thr Lys Phe 165 170 Leu Ser Asn Phe Leu Gly Ser Lys Arg Gly Asn Lys Asp Leu Arg Ala 185 Arg Ala Asp Ala His Asn Thr His Val Gly Ile Lys Ala Val Lys Ser 205 Gly Leu Arg Thr Thr Cys Lys Cys His Gly Val Ser Gly Ser Cys Ala 215 Val Arg Thr Cys Trp Lys Gln Leu Sér Pro Phe Arg Glu Thr Gly Gln 230 235 Val Leu Lys Leu Arg Tyr Asp Ser Ala Val Lys Val Ser Ser Ala Thr 245 250 Asn Glu Ala Leu Gly Arg Leu Glu Leu Trp Ala Pro Ala Arg Gln Gly 260 265 270 Ser Leu Thr Lys Gly Leu Ala Pro Arg Ser Gly Asp Leu Val Tyr Met 280 285 Glu Asp Ser Pro Ser Phe Cys Arg Pro Ser Lys Tyr Ser Pro Gly Thr 295 300 Ala Gly Arq Val Cys Ser Arg Glu Ala Ser Cys Ser Ser Leu Cys Cys 305 315 310 Gly Arg Gly Tyr Asp Thr Gln Ser Arg Leu Val Ala Phe Ser Cys His 330 325 Cys Gln Val Gln Trp Cys Cys Tyr Val Glu Cys Gln Gln Cys Val Gln 350 340 345 Glu Glu Leu Val Tyr Thr Cys Lys His 360 355

<210> 28

<211> 365

<212> PRT

<213> Homo sapiens

<400> 28

Met Trp Leu Leu Leu Thr Thr Thr Cys Leu Ile Cys Gly Thr Leu Asn

1 5 10 15

Ala Gly Gly Phe Leu Asp Leu Glu Asn Glu Val Asn Pro Glu Val Trp

20 25 30

Met	Asn	Thr 35	Ser	Glu	Ile	Ile	Ile 40	Tyr	Asn	Gly	Tyr	Pro 45	Ser	Glu	Glu
Tyr	Glu 50	Val	Thr	Thr	Glu	Asp 55	Gly	Tyr	Ile	Leu	Leu 60	Val	Asn	Arg	Ile
Pro	Tyr	Gly	Arg	Thr	His	Ala	Arg	Ser	Thr	Ala	Asp	Ala	Gly	Tyr	Asp
65					70					75					80
Val	Trp	Met	Gly	Asn	Ser	Arg	Gly	Asn		Trp	Ser	Arg	Arg		Lys
				85					90					95	
Thr	Leu	Ser		Thr	Asp	Glu	Lys		Trp	Ala	Phe	Ser		Asp	Glu
	_		100			_		105		_			110	_	
Met	Ala	_	Tyr	Asp	Leu	Pro	Gly	Val	Ile	Asp	Phe		Val	Asn	Lys
m1	<b>63</b>	115	<b>6</b> 1	T	T	m	120	T1-	C1	114 -	C =	125	C1	mb w	Th v
Thr	_	GIN	GIU	ьуs	Leu		Phe	ire	сту	HIS		Leu	СТУ	1111	IIII
т1.	130	Dha	W-1	70.70	Dho	135	Thr	Mo+	Dro	Gl 11	140	Δ1 >	Gln	Ara	Tle
11e	сту	Pne	vaı	Ala	150	ser	TILL	Met	FIO	155	Leu	AIa	GIII	ALG	160
	Mot	Λen	Dhe	Δla		Gly	Pro	Thr	Tle		Phe	I.vs	Tur	Pro	
ьys	Met	ASII	rne	165	пеп	GIY	110	1111	170	Der	TITC	БУЗ	1 <b>y</b> 1	175	
Glv	Tle	Phe	Thr		Phe	Phe	Leu	Len		Asn	Ser	Ile	Ile		Ala
Gry	116	1110	180	111.9	1110	1110	БСС	185			001		190	-10	
Val	Phe	Glv		Lvs	Glv	Phe	Phe		Glu	Asp	Lys	Lys		Lys	Ile
		195		2	-		200			-		205		-	
Ala	Ser		Lys	Ile	Cys	Asn	Asn	Lys	Ile	Leu	Trp	Leu	Ile	Cys	·Ser
	210					215					220				
Glu	Phe	Met	Ser	Leu	Trp	Ala	Gly	Ser	Asn	Lys	Lys	Asn	Met.	Asn	Gln
225					230					235					240
Ser	Arg	Met	Asp	Val	Tyr	Met	Ser	His	Ala	Pro	Thr	Gly	Ser	Ser	Val
				245					250					255	
His	Asn	Ile	Leu	His	Ile	Lys	Gln	Leu	Tyr	His	Ser	Asp	Glu	Phe	Arg
			260					265					270		
Ala	Tyr		Trp	Gly	Asn	Asp	Ala	Asp	Asn	Met	Lys		Tyr	Asn	Gln
		275			_		280				_	285	_	<b></b> .	7.3
Ser		Pro	Pro	Ile	Tyr		Leu	Thr	Ala	Met		Val	Pro	Thr	Ala
	290			~ -		295		-	., .	m)	300	<i>a</i> 3	70	373	71.
	Trp	Ala	Gly	Gly		Asp	Val	Leu	val		Pro	GIn	Asp	val	
305	~ 1	т -	D	C1 :-	310	Т	C ~ ==	T ~	u	315	Dh-	т	T 0	T 0.11	320 Pro
Arg	тте	Leu	Pro	325	тте	ьys	Ser	ьeu	330	ıyr	rne	гуз	ьец	леи 335	FIO
Aen	Тνν	Δen	Hie		Asn	Phe	Val	Ттр		Len	Asp	Ala	Pro		Ara
1130	115	11311	340		1100	- 110		345	1				350		
			- 10												·

Met Tyr Ser Glu Ile Ile Ala Leu Met Lys Ala Tyr Ser 355 360 365

<210> 29 <211> 397 <212> PRT <213> Homo sapiens <400> 29 Met Trp Gln Leu Leu Ala Ala Cys Trp Met Leu Leu Gly Ser 10 Met Tyr Gly Tyr Asp Lys Lys Gly Asn Asn Ala Asn Pro Glu Ala Asn 25 Met Asn Ile Ser Gln Ile Ile Ser Tyr Trp Gly Tyr Pro Tyr Glu Glu 40 Tyr Asp Val Thr Thr Lys Asp Gly Tyr Ile Leu Gly Ile Tyr Arg Ile 50 55 Pro His Gly Arg Gly Cys Pro Gly Arg Thr Ala Pro Lys Pro Ala Val 75 Tyr Leu Gln His Gly Leu Ile Ala Ser Ala Ser Asn Trp Ile Cys Asn 90 85 Leu Pro Asn Asn Ser Leu Ala Phe Leu Leu Ala Asp Ser Gly Tyr Asp 105 Val Trp Leu Gly Asn Ser Arg Gly Asn Thr Trp Ser Arg Lys His Leu 125 120 Lys Leu Ser Pro Lys Ser Pro Glu Tyr Trp Ala Phe Ser Leu Asp Glu 130 135 Met Ala Lys Tyr Asp Leu Pro Ala Thr Ile Asn Phe Ile Ile Glu Lys 155 Thr Gly Gln Lys Arg Leu Tyr Tyr Val Gly His Ser Gln Gly Thr Thr 165 170 Ile Ala Phe Ile Ala Phe Ser Thr Asn Pro Glu Leu Ala Lys Lys Ile 185 Lys Ile Phe Phe Ala Leu Ala Pro Val Val Thr Val Lys Tyr Thr Gln 200 Ser Pro Met Lys Lys Leu Thr Thr Leu Ser Arg Arg Val Val Lys Val 220 210 215 Leu Phe Gly Asp Lys Met Phe His Pro His Thr Leu Phe Asp Gln Phe

230

235

240

Ile Ala Thr Lys Val Cys Asn Arg Lys Leu Phe Arg Arg Ile Cys Ser 250 245 Asn Phe Leu Phe Thr Leu Ser Gly Phe Asp Pro Gln Asn Leu Asn Met 260 265 Ser Arg Leu Asp Val Tyr Leu Ser His Asn Pro Ala Gly Thr Ser Val 280 285 275 Gln Asn Met Leu His Trp Ala Gln Leu Tyr His Ser Asp Glu Phe Arg 295 300 290 Ala Tyr Asp Trp Gly Asn Asp Ala Asp Asn Met Lys His Tyr Asn Gln 315 Ser His Pro Pro Ile Tyr Asp Leu Thr Ala Met Lys Val Pro Thr Ala 325 Ile Trp Ala Gly Gly His Asp Val Leu Val Thr Pro Gln Asp Val Ala 345 Arg Ile Leu Pro Gln Ile Lys Ser Leu His Tyr Phe Lys Leu Leu Pro 360 365 355 Asp Trp Asn His Phe Asp Phe Val Trp Gly Leu Asp Ala Pro Gln Arg 370 375 380 Met Tyr Ser Glu Ile Ile Ala Leu Met Lys Ala Tyr Ser 395 390

<210> 30

<211> 3705

<212> PRT

<213> Homo sapiens

<400> 30

 Met
 Ala
 Lys
 Arg
 Leu
 Cys
 Ala
 Gly
 Ser
 Ala
 Leu
 Cys
 Val
 Arg
 Gly
 Pro

 1
 5
 10
 15
 15
 15
 15
 15

 Arg
 Gly
 Pro
 Ala
 Pro
 Leu
 Leu
 Leu
 Val
 Gly
 Leu
 Ala
 Leu
 Gly
 Ala

 Ala
 Arg
 Glu
 Glu
 Ala
 Gly
 Gly
 Gly
 Phe
 Ser
 Leu
 His
 Pro
 Pro

 Tyr
 Phe
 Asn
 Leu
 Ala
 Gly
 Ala
 Arg
 Ile
 Ala
 Ala
 Ser
 Pro
 Pro
 Pro
 Pro
 Pro
 Pro
 Pro
 Pro
 Ala
 Arg
 Leu
 Arg
 Pro
 Arg
 Pro
 Arg
 Pro
 Arg
 Pro
 Thr
 Glu
 Asp
 Leu

 Gly
 Glu
 Glu
 Arg
 Gly</t

Lys Ala His Pro Ala Ser Asn Ala Ile Asp Gly Thr Glu Arg Trp Tr  115	Thr	Ile	Arg	Gly 100	Gln	Tyr	Cys	Asp	Ile 105	Cys	Thr	Ala	Ala	Asn 110	Ser	Asn
115	Lvs	Ala	His		Ala	Ser	Asn	Ala		Asp	Gly	Thr	Glu	Arg	Trp	Trp
Thr Leu Asp Leu Gly Gln Val Phe His Val Ala Tyr Val Leu Ile Ly 155   167							<b>-</b>			1				,	-	-
Thr Leu Asp Leu Gly Gln Val Phe His Val Ala Tyr Val Leu Ile Ly 155   167	Gln	Ser		Pro	Leu	Ser	Arg	Gly	Leu	Glu	Tyr	Asn	Glu	Val	Asn	Val
145   150   150   155   166   167   167   168   169   165   166   170   170   175   175   175   175   175   175   180   180   185   190   170   175   175   180   180   185   190   185   185   190   185																
145   150   150   155   166   167   167   168   169   165   166   170   170   175   175   175   175   175   175   180   180   185   190   170   175   175   180   180   185   190   185   185   190   185	Thr	Leu	Asp	Leu	Gly	Gln	Val	Phe	His	Val	Ala	Tyr	Val	Leu	Ile	Lys
Phe         Ala         Ass         Ser         Pro         Arg         Pro         Ass         Leu         Trp         Val         Leu         Glu         Arg         Ser         Meg           Asp         Phe         Gly         Arg         Thr         Tyr         Gln         Pro         Gln         Phe         Phe         Phe         Ala         Ser         Leu         Leu         Arg         Phe         Gly         Pro         Gln         Thr         Leu         Glu         Arg         Phe         Gly         Pro         Gln         Thr         Leu         Glu         Arg         Phe         Gly         Pro         Gln         Thr         Leu         Glu         Thr         Arg         Phe         Leu         Arg         Pro         Glu         Thr         Arg         Leu         Val         Arg         Pro         Leu         Val         Arg         Pro         Leu         Arg         Pro         Glu         Pro         Arg         Pro         Leu         Arg			-		_											160
Asp Phe Gly Arg Thr Tyr Gln Pro Trp Gln Phe Phe Ala Ser Ly 180		Ala	Asn	Ser	Pro	Arg	Pro	Asp	Leu	Trp	Val	Leu	Glu	Arg	Ser	Met
Arg       Asp       Cys       Leu       Glu       Arg       Phe       Gly       Pro       Gln       Thr       Leu       Glu       Arg       Ile       Thr       Thr       Leu       Glu       Arg       Ile       Thr       Thr       Glu       Thr       Leu       Glu       Arg       Ile       Thr       Thr       Glu       Thr       Leu       Glu       Arg       Ile       Val       Phe       Thr       Glu       Thr       Ser       Leu       Cys       Leu       Arg       Ile       Val       Phe       Leu       Arg       Ile       Val       Phe       Leu       Leu       Arg       Glu       Arg       Pro       Glu       Arg       Ile       Val       Ser       Leu       Leu       Leu       Arg       Glu       Phe       Thr       Leu       Arg       Glu       Phe       Thr       Leu       Arg       Glu       Phe       Thr       Arg       Cys       Thr       Leu       Leu       Leu       Arg       Cys       Arg       Thr       Leu       Leu       Leu       Arg       Thr       Arg       Thr       Leu       Leu       Leu       Arg       Thr       Leu       A																
Arg       Asp       Cys       Leu       Glu       Arg       Phe       Gly       Pro       Gln       Thr       Leu       Glu       Arg       Ile       Thr       Thr       Leu       Glu       Arg       Ile       Thr       Thr       Glu       Thr       Leu       Glu       Arg       Ile       Thr       Thr       Glu       Thr       Leu       Glu       Arg       Ile       Val       Phe       Thr       Glu       Thr       Ser       Leu       Cys       Leu       Arg       Ile       Val       Phe       Leu       Arg       Ile       Val       Phe       Leu       Leu       Arg       Glu       Arg       Pro       Glu       Arg       Ile       Val       Ser       Leu       Leu       Leu       Arg       Glu       Phe       Thr       Leu       Arg       Glu       Phe       Thr       Leu       Arg       Glu       Phe       Thr       Arg       Cys       Thr       Leu       Leu       Leu       Arg       Cys       Arg       Thr       Leu       Leu       Leu       Arg       Thr       Arg       Thr       Leu       Leu       Leu       Arg       Thr       Leu       A	Asp	Phe	Gly	Arg	Thr	Tyr	Gln	Pro	Trp	Gln	Phe	Phe	Ala	Ser	Ser	Lys
Asp       Cys       Leu       Glu       Arg       Pho       Gly       Pro       Gln       Thr       Leu       Glu       Arg       Ile       Thr       Alu       Alu       Alu       Ile       Cys       Thr       Thr       Glu       Tyr       Ser       Arg       Ile       Val       Pro       Glu       Tyr       Ser       Arg       Ile       Val       Pro       Glu       Tyr       Ser       Ile       Val       Alu       Ser       Leu       Val       Asn       Glu       Arg       Pro       Glu       Alu       A	•		_													
195	Arg	Asp	Cys		Glu	Arg	Phe	Gly	Pro	Gln	Thr	Leu	Glu	Arg	Ile	Thr
Asp         Asp         Asp         Ala         Ala         Ile         Cys         Thr         Thr         Glu         Tyr         Ser         Arg         Ile         Val         Park         Ser         Leu         Glu         Asp         Ile         Val         Val         Ser         Leu         Val         Asp         Asp         Arg         Pro         Glu         Val         Asp         Leu         Val         Asp         Ile         Val         Ser         Ile         Val         Ser         Ile         Val         Ser         Ile         Val         Ser         Ile         Val         Asp         Ile         Val         Asp         Ile         Asp         Ile         Ile <td>2</td> <td>•</td> <td></td> <td></td> <td></td> <td>_</td> <td></td>	2	•				_										
Leu         Glu         Asn         Gly         Glu         Ile         Val         Val         Leu         Val         Asn         Gly         Arg         Pro         Gl           225	Arg	Asp		Ala	Ala	Ile	Cys	Thr	Thr	Glu	Tyr	Ser	Arg	Ile	Val	Pro
Leu         Glu         Asn         Gly         Glu         Ile         Val         Ser         Leu         Val         Asn         Gly         Arg         Pro         Gly           225			-													
225       230       235       235       227       225       227       2	Leu		Asn	Gly	Glu	Ile	Val	Val	Ser	Leu	Val	Asn	Gly	Arg	Pro	Gly
Ala       Met       Asn       Phe       Ser       Tyr       Ser       Pro       Leu       Arg       Heu       Arg       Leu       Arg       Phe       Leu       Arg       Thr       Asn       Thr       Leu       Arg       Leu       Arg       Phe       Leu       Arg       Thr       Asn       Thr       Leu       Leu       Arg       Arg       Thr       Asn       Thr       Leu       Leu       Arg       Arg       Thr       Arg       Thr       Leu       Arg       Thr       Arg       Thr       Leu       Arg       Arg       Thr       Arg       Thr       Leu       Arg       Arg       Thr       Arg       Thr       Leu       Arg       Arg       Thr       Arg       Thr       Arg       Thr       Arg       Thr       Arg       Arg       Thr       Arg       Arg       Thr       Arg       A				-												240
Thr         Asn         Val         Arg         Leu         Arg         Leu         Arg         Leu         Arg         Leu         Arg         Thr         Asn         Thr         Leu         Leu         Gly         H         Leu         Arg         Thr         Asn         Thr         Leu         Leu         Gly         H         Leu         Gly         F         Thr         Asn         Thr         Arg         Ty		Met	Asn	Phe	Ser	Tyr	Ser	Pro	Leu	Leu	Arg	Glu	Phe	Thr	Lys	Ala
Leu Met Gly Lys Ala Leu Arg Asp Pro Thr Val Thr Arg Arg Tyr Tyr Ser In Cys Gln Rasp Ron Thr Ser In S																
Leu Met Gly Lys Ala Leu Arg Asp Pro Thr Val Thr Arg Arg Tyr Tyr Ser In Cys Gln Rasp Ron Thr Ser In S	Thr	Asn	Val	Arg	Leu	Arg	Phe	Leu	Arg	Thr	Asn	Thr	Leu	Leu	Gly	His
Tyr       Ser       1le       Lys       Asp       1le       Ser       1le       Gly       Gly       Arg       Cys       Val       Cys       His       G         1 290																
Tyr       Ser       1le       Lys       Asp       1le       Ser       1le       Gly       Gly       Arg       Cys       Val       Cys       His       G         1 290	Leu	Met	Gly	Lys	Ala	Leu	Arg	Asp	Pro	Thr	Val	Thr	Arg	Arg	Tyr	Tyr
His       Ala       Asp       Ala       Cys       Asp       Ala       Lys       Asp       Pro       Thr       Asp       Pro       Phe       Asp       Pro       Lys         305			275					280					285			
His       Ala       Asp       Ala       Cys       Asp       Ala       Lys       Asp       Pro       Thr       Asp       Pro       Phe       Asp       Pro       Lys         305	Tyr	Ser	Ile	Lys	Asp	Ile	Ser	Ile	Gly	Gly	Arg	Cys	Val	Cys	His	Gly
305		290					295					300				
305	His	Ala	Asp	Ala	Cys	Asp	Ala	Lys	Asp	Pro	Thr	Asp	Pro	Phe	Arg	Leu
Cys       Pro Gly       Phe Asn Gln       Gln       Pro Gly       Pro Hole       Asn Gln       Gln       Pro Hole       Pro Hole       Ala Hole	305					310					315					320
Cys Pro Gly Phe Asn Gln Gln Pro Trp Lys Pro Ala Thr Ala Asn S 340	Gln	Cys	Thr	Cys	Gln	His	Asn	Thr	Cys	Gly	Gly	Thr	Cys	Asp	Arg	Cys
Ala Asn       Glu Cys       Gln Ser       Cys       Asn Cys       Tyr Gly His Ala Thr Asp Cys       Asp Cys         Tyr       Tyr Asp Pro Glu Val Asp Sys       Arg Arg Arg Arg Arg Arg Sys       Ala Ser Gln Ser Leu Arg Sys       Leu Arg Sys         Gly Thr Tyr Gln Gly Gly Gly Gly Val Cys       Tyr Arg Ser Gln Sys       Arg Sys       Tyr Arg Ser Gly Sys         Thr Gly Val Asn Cys       Glu Arg Cys       Leu Pro Gly Phe Tyr Arg Ser Gys					325					330					335	•
Ala Asn Glu Cys Gln Ser Cys Asn Cys Tyr Gly His Ala Thr Asp Cys Tyr Tyr Asp Pro Glu Val Asp Arg Arg Arg Arg Arg Arg Ala Ser Gln Ser Leu Asp Gly Thr Tyr Gln Gly Gly Gly Gly Val Cys Ile Asp Cys Gln His His His Thr Gly Val Asn Cys Glu Arg Cys Leu Pro Gly Phe Tyr Arg Ser Arg Arg Arg Arg Arg Arg Arg Arg Arg Ar	Cys	Pro	Gly	Phe	Asn	Gln	Gln	Pro	Trp	Lys	Pro	Ala	Thr			Ser
Tyr       Asp       Pro Glu Val Asp       Arg																
Tyr Tyr Asp Pro Glu Val Asp Arg Arg Arg Ala Ser Gln Ser Leu A 370	Ala	Asn	Glu	ı Cys	Gln	Ser	Cys	Asn	Cys	Tyr	Gly	His			Asp	) Cys
370 375 380 Series Seri																_
Gly Thr Tyr Gln Gly Gly Gly Val Cys Ile Asp Cys Gln His His T 385 390 395 4 Thr Gly Val Asn Cys Glu Arg Cys Leu Pro Gly Phe Tyr Arg Ser F	Tyr	Tyr	Asp	Pro	Glu	ı Val	Asp	Arg	Arg	Arg	, Ala			Ser	. Lei	a Asp
385 390 395 4 Thr Gly Val Asn Cys Glu Arg Cys Leu Pro Gly Phe Tyr Arg Ser F							-									
Thr Gly Val Asn Cys Glu Arg Cys Leu Pro Gly Phe Tyr Arg Ser F	Gly	Thr	Туг	Glr	Gly	, Gly	Gly	v Val	Cys	Il∈			Glr	n His	His	
4.5																400
405 410 415	Thr	Gly	v Val	l Asr	Cys	s Glu	ı Arç	g Cys	Let	ı Pro	o Gly	Phe	э Туі	Arq		
					405	5				410	)				415	)

Asn His Pro Leu Asp Ser Pro His Val Cys Arg Arg Cys Asn Cys Glu Ser Asp Phe Thr Asp Gly Thr Cys Glu Asp Leu Thr Gly Arg Cys Tyr Cys Arg Pro Asn Phe Ser Gly Glu Arg Cys Asp Val Cys Ala Glu Gly Phe Thr Gly Phe Pro Ser Cys Tyr Pro Thr Pro Ser Ser Ser Asn Asp Thr Arg Glu Gln Val Leu Pro Ala Gly Gln Ile Val Asn Cys Asp Cys Ser Ala Ala Gly Thr Gln Gly Asn Ala Cys Arg Lys Asp Pro Arg Val Gly Arg Cys Leu Cys Lys Pro Asn Phe Gln Gly Thr His Cys Glu Leu Cys Ala Pro Gly Phe Tyr Gly Pro Gly Cys Gln Pro Cys Gln Cys Ser Ser Pro Gly Val Ala Asp Asp Arg Cys Asp Pro Asp Thr Gly Gln Cys Arg Cys Arg Val Gly Phe Glu Gly Ala Thr Cys Asp Arg Cys Ala Pro Gly Tyr Phe His Phe Pro Leu Cys Gln Leu Cys Gly Cys Ser Pro Ala Gly Thr Leu Pro Glu Gly Cys Asp Glu Ala Gly Arg Cys Leu Cys Gln Pro Glu Phe Ala Gly Pro His Cys Asp Arg Cys Arg Pro Gly Tyr His Gly Phe Pro Asn Cys Gln Ala Cys Thr Cys Asp Pro Arg Gly Ala Leu Asp Gln Leu Cys Gly Ala Gly Gly Leu Cys Arg Cys Arg Pro Gly Tyr Thr Gly Thr Ala Cys Gln Glu Cys Ser Pro Gly Phe His Gly Phe Pro Ser Cys Val Pro Cys His Cys Ser Ala Glu Gly Ser Leu His Ala Ala Cys Asp Pro Arg Ser Gly Gln Cys Ser Cys Arg Pro Arg Val Thr Gly Leu Arg Cys Asp Thr Cys Val Pro Gly Ala Tyr Asn Phe Pro Tyr Cys Glu Ala Gly Ser Cys His Pro Ala Gly Leu Ala Pro Val Asp Pro Ala 

Leu	Pro	GIu	740	GIn	Val	Pro	Cys	Met 745	Cys	Arg	Ala	HIS	750	Glu	GIŞ
Pro	Ser	Cys 755	Asp	Arg	Cys	Lys	Pro 760	Gly	Phe	Trp	Gly	Leu 765	Ser	Pro	Ser
Asn	Pro 770	Glu	Gly	Cys	Thr	Arg 775	Cys	Ser	Cys	Asp	Leu 780	Arg	Gly	Thr	Leu
Gly 785	Gly	Val	Ala	Glu	Cys 790	Gln	Pro	Gly	Thr	Gly 795	Gln	Cys	Phe	Cys	Lys 800
Pro	His	Val	Cys	Gly 805	Gln	Ala	Cys	Ala	Ser 810	Cys	Lys	Asp	Gly	Phe 815	Phe
Gly	Leu	Asp	Gln 820	Ala	Asp	Tyr	Phe	Gly 825	Cys	Arg	Ser	Cys	Arg 830	Cys	Asp
Ile	Gly	Gly 835	Ala	Leu	Gly	Gln	Ser 840	Cys	Glu	Pro	Arg	Thr 845	Gly	Val	Cys
Arg	Cys 850	Arg	Pro	Asn	Thr	Gln 855	Gly	Pro	Thr	Cys	Ser 860	Glu	Pro	Ala	Arg
Asp 865	His	Tyr	Leu	Pro	Asp 870	Leu	His	His	Leu	Arg 875	Leu	Glu	Leu	Glu	Glu 880
Ala	Ala	Thr	Pro	Glu 885	Gly	His	Ala	Val	Arg 890	Phe	Gly	Phe	Asn	Pro 895	Leu
Glu	Phe	Glu	Asn 900	Phe	Ser	Trp	Arg	Gly 905	Tyr	Ala	Gln	Met	Ala 910	Pro	Val
Gln	Pro	Arg 915	Ile	Val	Ala	Arg	Leu 920	Asn	Leu	Thr	Ser	Pro 925	Asp	Leu	Phe
Trp	Leu 930	Val	Phe	Arg	Tyr	Val 935	Asn	Arg	Gly	Ala	Met 940	Ser	Val	Ser	Gly
Arg 945	Val	Ser	Val	Arg	Glu 950	Glu	Gly	Arg	Ser	Ala 955	Thr	Cys	Ala	Asn	Cys 960
Thr	Ala	Gln	Ser	Gln 965	Pro	Val	Ala	Phe	Pro 970	Pro	Ser	Thr	Glu	Pro 975	Ala
Phe	Ile	Thr	Val 980	Pro	Gln	Arg	Gly	Phe 985	Gly	Glu	Pro	Phe	Val 990	Leu	Asn
Pro	Gly	Thr 995	Trp	Ala	Leu	Arg	Val 100	Glu O	Ala `	Glu	Gly	Val 100		Leu	Asp
Tyr	Val 101		Leu	Leu	Pro	Ser 101		Tyr	Tyr	Glu	Ala 102		Leu	Leu	Gln
Leu	Arg	Val	Thr	Glu	Ala	Cys	Thr	Tyr	Arg	Pro	Ser	Ala	Gln	Gln	Ser
102	5				103	0				103	5				1040
Gly	Asp	Asn	Cys	Leu	Leu	Tyr	Thr	His	Leu	Pro	Leu	Asp	Gly	Phe	Pro
_	_		-	104					105					105	

Ser	Ala	Ala	Gly	Leu	Glu	Ala	Leu	Cys	Arg	Gln	Asp	Asn	Ser	Leu	Pro
			1060	)				1065	5				1070	)	
Arg	Pro	Cys	Pro	Thr	Glu	Gln	Leu	Ser	Pro	Ser	His	Pro	Pro	Leu	Ile
		1075	5				1080	)				1085	5		
Thr	Cys	Thr	Gly	Ser	Asp	Val	Asp	Val	Gln	Leu	Gln	Val	Ala	Val	Pro
	1090	)				1095	5			1	1100	)			
Gln	Pro	Gly	Arg	Tyr	Ala	Leu	Val	Val	Glu	Tyr	Ala	Asn	Glu	Asp	Ala
1105	5				1110	)				1115	5				1120
Arg	Gln	Glu	Val	Gly	Val	Ala	Val	His	Thr	Pro	Gln	Arg	Ala	Pro	Gln
				1125	5				1130	)				1135	5
Gln	Gly	Leu	Leu	Ser	Leu	His	Pro	Cys	Leu	Tyr	Ser	Thr	Leu	Cys	Arg
			1140	)				1145	5				1150	)	
Gly	Thr	Ala	Arg	Asp	Thr	Gln	Asp	His	Leu	Ala	Val	Phe	His	Leu	Asp
		1155	5				1160	)				1165	5		
Ser	Glu	Ala	Ser	Val	Arg	Leu	Thr	Ala	Glu	Gln	Ala	Arg	Phe	Phe	Leu
	1170	)				1175	5				1180	)			
His	Gly	Val	Thr	Leu	Val	Pro	Ile	Glu	Glu	Phe	Ser	Pro	Glu	Phe	Val
1185	5				1190	)				1195	5				1200
Glu	Pro	Arg	Val	Ser	Cys	Ile	Ser	Ser	His	Gly	Ala	Phe	Gly	Pro	Asn
				1205	5				1210	0				1215	5
Ser	Ala	Ala	Cys	Leu	Pro	Ser	Arg	Phe	Pro	Lys	Pro	Pro	Gln	Pro	Ile
			1220	)				1225	5				1230	)	
Ile	Leu	Arg	Asp	Cys	Gln	Val	Ile	Pro	Leu	Pro	Pro	Gly	Leu	Pro	Leu
												1045	5		
		123	5				1240	)				1245	,		
Thr	His			Asp	Leu	Thr			Met	Ser	Pro	Ala		Pro	Arg
Thr	His	Ala		Asp	Leu	Thr	Pro		Met	Ser	Pro 1260	Ala		Pro	Arg
	1250	Ala	Gln			1255	Pro	Ala			1260	Ala	Gly		Arg Leu
	1250 Arg	Ala	Gln			1255 Val	Pro	Ala			1260 Glu	Ala	Gly		
Pro 1265	1250 Arg	Ala ) Pro	Gln Pro	Thr	Ala 1270	1255 Val	Pro Asp	Ala Pro	Asp	Ala 1275	1260 Glu 5	Ala	Gly Thr	Leu	Leu 1280
Pro 1265	1250 Arg	Ala ) Pro	Gln Pro	Thr	Ala 1270 Thr	1255 Val	Pro Asp	Ala Pro	Asp	Ala 1275 Thr	1260 Glu 5	Ala ) Pro	Gly Thr	Leu	Leu 1280 Leu
Pro 1265 Arg	1250 Arg 5 Glu	Ala ) Pro Pro	Gln Pro Gln	Thr Ala 1285	Ala 1270 Thr	1255 Val ) Val	Pro Asp Val	Ala Pro Phe	Asp Thr 1290	Ala 1275 Thr	1260 Glu D His	Ala ) Pro Val	Gly Thr Pro	Leu Thr 1295	Leu 1280 Leu
Pro 1265 Arg	1250 Arg 5 Glu	Ala ) Pro Pro	Gln Pro Gln	Thr Ala 1285	Ala 1270 Thr	1255 Val ) Val	Pro Asp Val	Ala Pro Phe	Asp Thr 1290 Tyr	Ala 1275 Thr	1260 Glu D His	Ala ) Pro Val	Gly Thr Pro	Leu Thr 1295 Pro	Leu 1280 Leu
Pro 1265 Arg	1250 Arg 5 Glu Arg	Ala Pro Pro Tyr	Gln Pro Gln Ala 1300	Thr Ala 1289 Phe	Ala 1270 Thr D	1255 Val ) Val Leu	Pro Asp Val	Ala Pro Phe Gly 1309	Asp Thr 1290 Tyr	Ala 1275 Thr O Gln	1260 Glu His	Ala ) Pro Val	Gly Thr Pro His	Leu Thr 1295 Pro	Leu 1280 Leu Thr
Pro 1265 Arg	1250 Arg 5 Glu Arg	Ala Pro Pro Tyr	Gln Pro Gln Ala 1300 Glu	Thr Ala 1289 Phe	Ala 1270 Thr D	1255 Val ) Val Leu	Pro Asp Val	Ala Pro Phe Gly 1309	Asp Thr 1290 Tyr	Ala 1275 Thr O Gln	1260 Glu His	Ala ) Pro Val Ala	Gly Thr Pro His 1310 Gln	Leu Thr 1295 Pro	Leu 1280 Leu Thr
Pro 1265 Arg Gly	1250 Arg Glu Arg	Ala ) Pro Pro Tyr Val 1315	Gln Pro Gln Ala 1300 Glu	Thr Ala 1285 Phe O Val	Ala 1270 Thr D Leu	1255 Val ) Val Leu	Pro Asp Val His Asn	Pro Phe Gly 1305 Ala	Asp Thr 1290 Tyr G	Ala 1275 Thr O Gln Arg	1260 Glu His Pro	Ala Pro Val Ala Trp	Gly Thr Pro His 1310 Gln	Leu Thr 1295 Pro O Gly	Leu 1280 Leu Thr
Pro 1265 Arg Gly	1250 Arg Glu Arg	Ala ) Pro Pro Tyr Val 1315 Ala	Gln Pro Gln Ala 1300 Glu	Thr Ala 1285 Phe O Val	Ala 1270 Thr D Leu	1255 Val ) Val Leu	Pro Asp Val His Asn 1320 His	Pro Phe Gly 1305 Ala	Asp Thr 1290 Tyr G	Ala 1275 Thr O Gln Arg	1260 Glu His Pro	Ala Pro Val Ala Trp 1325	Gly Thr Pro His 1310 Gln	Leu Thr 1295 Pro O Gly	Leu 1280 Leu Thr
Pro 1265 Arg Gly Phe	Arg Glu Arg Pro Asn 1330	Ala ) Pro Tyr Val 131! Ala	Gln Pro Gln Ala 1300 Glu 5 Ser	Thr Ala 1285 Phe O Val	Ala 1270 Thr Deu Leu Leu	Val Val Leu Ile Pro 133	Pro Asp Val His Asn 1320 His	Pro Phe Gly 1309 Ala O Gly	Asp Thr 1290 Tyr Gly Tyr	Ala 1275 Thr O Gln Arg	1260 Glu His Pro Val Cys 1340	Ala Pro Val Ala Trp 1325	Gly Thr Pro His 1310 Gln Thr	Leu Thr 1295 Pro Gly Leu	Leu 1280 Leu Thr His
Pro 1265 Arg Gly Phe	1250 Arg Glu Arg Pro Asn 1330 Cys	Ala ) Pro Tyr Val 131! Ala	Gln Pro Gln Ala 1300 Glu 5 Ser	Thr Ala 1285 Phe O Val	Ala 1270 Thr Deu Leu Leu	Val Val Leu Ile Pro 1339	Pro Asp Val His Asn 1320 His	Pro Phe Gly 1309 Ala O Gly	Asp Thr 1290 Tyr Gly Tyr	Ala 1275 Thr O Gln Arg	1260 Glu His Pro Val Cys 1340 His	Ala ) Pro Val Ala Trp 1325 Arg	Gly Thr Pro His 1310 Gln Thr	Leu Thr 1295 Pro Gly Leu	Leu 1280 Leu Thr His
Pro 1265 Arg Gly Phe Ala Val 1345	Arg Glu Arg Pro Asn 1330 Cys	Ala ) Pro Tyr Val 1319 Ala ) Glu	Gln Pro Gln Ala 1300 Glu 5 Ser Gly	Thr Ala 1285 Phe Val Phe Gln	Ala 1270 Thr Deu Leu Cys Ala 1350	Val Val Leu Ile Pro 1339 Leu	Pro Asp Val His Asn 1320 His	Pro Phe Gly 1305 Ala Cly Asp	Asp Thr 1290 Tyr Gly Tyr Val	Ala 1275 Thr O Gln Arg Gly Thr 1355	His Pro Val Cys 1340 His	Ala ) Pro Val Ala Trp 1325 Arg	Thr Pro His 1310 Gln Thr	Leu Thr 1295 Pro Gly Leu Leu	Leu 1280 Leu Thr His Val Thr

Leu	Val	Val	Pro	Glu	Asn	Val	Tyr	Ser	Phe	Gly	Tyr	Leu	Arg	Glu	Glu
			1380					1385					1390		
Pro	Leu	Asp	Lys	Ser	Tyr	Asp	Phe	Ile	Ser	His	Cys	Ala	Ala	Gln	Gly
		1395	j				1400	)				1405	<u>,                                    </u>		
Tyr	His	Ile	Ser	Pro	Ser	Ser	Ser	Ser	Leu	Phe	Cys	Arg	Asn	Ala	Ala
	1410	)				1415	,				1420	)			,
Ala	Ser	Leu	Ser	Leu	Phe	Tyr	Asn	Asn	Gly	Ala	Arg	Pro	Cys	Gly	Cys
1425	5				1430	)				1435	5				1440
His	Glu	Val	Gly	Ala	Thr	Gly	Pro	Thr	Cys	Glu	Pro	Phe	Gly	Gly	Gln
				1445	5				1450	)				1455	5
Cys	Pro	Cys	His	Ala	His	Val	Ile	Gly	Arg	Asp	Cys	Ser	Arg	Cys	Ala
			1460	)				1465	<u>,                                    </u>				1470	)	
Thr	Gly	Tyr	Trp	Gly	Phe	Pro	Asn	Cys	Arg	Pro	Cys	Asp	Cys	Gly	Ala
		1475	5				1480	)				1485	5		
Arg	Leu	Cys	Asp	Glu	Leu	Thr	Gly	Gln	Cys	Ile	Cys	Pro	Pro	Arg	Thr
	1490	)				1495	5				1500	)			
Ile	Pro	Pro	Asp	Cys	Leu	Leu	Cys	Gln	Pro	Gln	Thr	Phe	Gly	Cys	His
150	5				1510	)				1515	5				1520
Pro	Leu	Val	Gly	Cys	Glu	Glu	Cys	Asn	Cys	Ser	Gly	Pro	Gly	Ile	Gln
				152	5				153	0				153	5
Glu	Leu	Thr	Asp	Pro	Thr	Cys	Asp	Thr	Asp	Ser	Gly	Gln	Cys	Lys	Cys
			154					1545					155		
Arg	Pro	Asn	Val	Thr	Gly	Arg	Arg	Cys	Asp	Thr	Cys	Ser	Pro	Gly	Phe
		155					156					156			
His	Gly	Tyr	Pro	Arg	Cys	Arg	Pro	Cys	Asp	Cys	His	Glu	Ala	Gly	Thr
	157					157					158				
Ala	Pro	Gly	Val	Cys	Asp	Pro	Leu	Thr	Gly	Gln	Cys	Tyr	Cys	Lys	Glu
158					159					159					1600
Asn	Val	Gln	Gly	Pro	Lys	Cys	Asp	Gln	Cys	Ser	Leu	Gly	Thr	Phe	Ser
				160					161					161	
Leu	Asp	Ala	Ala	Asn	Pro	Lys	Gly	Cys	Thr	Arg	Cys	Phe	Cys	Phe	Gly
	_		162					162					163		
Ala	Thr	Glu	Arg	Cys	Arg	Ser	Ser	Ser	Tyr	Thr	Arg	Gln	Glu	Phe	Val
		163					164					164			
Asp	Met	Glu	Gly	Trp	Val	Leu	Leu	Ser	Thr	Asp	Arg	Gln	Val	Val	Pro
_	165					165					166				
His	Glu	Arg	Gln	Pro	Gly	Thr	Glu	Met	Leu	Arg	Ala	Asp	Leu	Arg	His
166			,		167					167					1680
٧aı	Pro	Glu	Ala	Val	Pro	Glu	Ala	Phe	Pro	Glu	Leu	Tyr	Trp	Gln	Ala

Pro	Pro	Ser	Tyr	Leu	Gly	Asp	Arg	Val	Ser	Ser	Tyr	Gly	Gly	Thr	Leu
			1700	)				1705	5				1710	)	
Arg	Tyr	Glu	Leu	His	Ser	Glu	Thr	Gln	Arg	Gly	Asp	Val	Phe	Val	Pro
		1715	5				1720	)				1725	5		
Met	Glu	Ser	Arg	Pro	Asp	Val	Val	Leu	Gln	Gly	Asn	Gln	Met	Ser	Ile
	1730	)				1735	5				1740	)			
Thr	Phe	Leu	Glu	Pro	Ala	Tyr	Pro	Thr	Pro	Gly	His	Val	His	Arg	Gly
1745	5				1750	)				1755	5				1760
Gln	Leu	Gln	Leu	Val	Glu	Gly	Asn	Phe	Arg	His	Thr	Glu	Thr	Arg	Asn
				1765	5				1770	)				1775	5
Thr	Val	Ser	Arg	Glu	Glu	Leu	Met	Met	Val	Leu	Ala	Ser	Leu	Glu	Gln
			1780	)				1785	5				1790	)	
Leu	Gln	Ile	Arg	Ala	Leu	Phe	Ser	Gln	Ile	Ser	Ser	Ala	Val	Phe	Leu
		1795	5				1800	)				1805	5		
Arg	Arg	Val	Ala	Leu	Glu	Val	Ala	Ser	Pro	Ala	Gly	Gln	Gly	Ala	Leu
	1810	)				1815	5				1820	)			
Ala	Ser	Asn	Val	Glu	Leu	Cys	Leu	Cys	Pro	Ala	Ser	Tyr	Arg	Gly	Asp
1825	5				1830	)				1835	5				1840
Ser	Cys	Gln	Glu	Cys	Ala	Pro	Gly	Phe	Tyr	Arg	Asp	Val	Lys	Gly	Leu
				1845	5				1850	)				1855	5
Phe	Leu	Gly	Arg	Cys	Val	Pro	Cys	Gln	Cys	His	Gly	His	Ser	Asp	Arg
Phe	Leu	Gly	Arg 1860		Val	Pro	Cys	Gln 1865		His	Gly	His	Ser 1870		Arg
		_	1860	)				1865	5				1870		
		_	1860 Gly	)				1865 Val	5				1870 Asn	)	
Cys	Leu	Pro	1860 Gly	Ser	Gly	Val	Cys	1865 Val	Asp	Cys	Gln	His 1885	1870 Asn	)	Glu
Cys	Leu	Pro 1875 His	1860 Gly	Ser	Gly	Val	Cys 1880 Gln	1865 Val	Asp	Cys	Gln	His 1885 Ser	1870 Asn	) Thr	Glu
Cys Gly	Leu Ala 1890	Pro 1875 His	1860 Gly Cys	Ser Glu	Gly Arg	Val Cys 1895	Cys 1880 Gln	1865 Val ) Ala	Asp Gly	Cys Phe	Gln Val 1900	His 1889 Ser	1870 Asn Ser	Thr Arg	Glu
Cys Gly	Leu Ala 1890 Pro	Pro 1875 His	1860 Gly Cys	Ser Glu	Gly Arg	Val Cys 1895 Val	Cys 1880 Gln	1865 Val ) Ala	Asp Gly	Cys Phe	Gln Val 1900 Pro	His 1889 Ser	1870 Asn Ser	Thr Arg	Glu Asp
Cys Gly Asp	Leu Ala 1890 Pro	Pro 187! His ) Ser	1860 Gly Cys	Ser Glu Pro	Gly Arg Cys 1910	Val Cys 1895 Val	Cys 1880 Gln Ser	1865 Val ) Ala Cys	Asp Gly Pro	Cys Phe Cys 191	Gln Val 1900 Pro	His 1885 Ser ) Leu	1870 Asn Ser Ser	Thr Arg Val	Glu Asp Pro
Cys Gly Asp	Leu Ala 1890 Pro	Pro 187! His ) Ser	1860 Gly Cys	Ser Glu Pro	Gly Arg Cys 1910	Val Cys 1895 Val	Cys 1880 Gln Ser	1865 Val ) Ala Cys	Asp Gly Pro	Cys Phe Cys 191!	Gln Val 1900 Pro	His 1885 Ser ) Leu	1870 Asn Ser Ser	Thr Arg Val	Glu Asp Pro 1920 Gln
Cys Gly Asp 1905 Ser	Leu Ala 1890 Pro 5	Pro 1879 His Ser	1860 Gly Cys Ala	Ser Glu Pro Ala 1925	Gly Arg Cys 1910 Glu	Val Cys 1895 Val O	Cys 1880 Gln Ser Cys	Val Ala Cys	Asp Gly Pro Leu 1930	Cys Phe Cys 191! Arg	Gln Val 1900 Pro Gly	His 1889 Ser D Leu	1870 Asn Ser Ser	Thr Arg Val Thr 1935	Glu Asp Pro 1920 Gln
Cys Gly Asp 1905 Ser	Leu Ala 1890 Pro 5	Pro 1879 His Ser	1860 Gly Cys Ala	Ser Glu Pro Ala 1925	Gly Arg Cys 1910 Glu	Val Cys 1895 Val O	Cys 1880 Gln Ser Cys	Val Ala Cys	Asp Gly Pro Leu 1930	Cys Phe Cys 191! Arg	Gln Val 1900 Pro Gly	His 1889 Ser D Leu	1870 Asn Ser Ser	Thr Arg Val Thr 1935	Glu Asp Pro 1920 Glņ
Cys Gly Asp 1905 Ser Cys	Leu Ala 1890 Pro Asn Leu	Pro 1875 His Ser Asn	1860 Gly Cys Ala Phe Lys 1940	Ser Glu Pro Ala 1925 Pro	Gly Arg Cys 1910 Glu Glu Gly	Val Cys 1895 Val O Gly	Cys 1880 Gln Ser Cys	1865 Val ) Ala Cys Val Gly 1945	Asp Gly Pro Leu 1930 Ala	Cys Phe Cys 191! Arg	Gln Val 1900 Pro Gly Cys	His 1889 Ser ) Leu Gly	1870 Asn Ser Ser Arg Arg	Thr Arg Val Thr 1935	Glu Asp Pro 1920 Gln 6
Cys Gly Asp 1905 Ser Cys	Leu Ala 1890 Pro Asn Leu	Pro 1875 His Ser Asn	1860 Gly Cys Ala Phe Lys 1940 Phe	Ser Glu Pro Ala 1925 Pro	Gly Arg Cys 1910 Glu Glu Gly	Val Cys 1895 Val O Gly	Cys 1880 Gln Ser Cys	1865 Val Ala Cys Val Gly 1945 Val	Asp Gly Pro Leu 1930 Ala	Cys Phe Cys 191! Arg	Gln Val 1900 Pro Gly Cys	His 1889 Ser ) Leu Gly	1870 Asn Ser Ser Arg Arg 1950 Cys	Thr Arg Val Thr 1935 Cys	Glu Asp Pro 1920 Gln 6
Cys Gly Asp 1905 Ser Cys	Leu Ala 1890 Pro Asn Leu Gly	Pro 1879 His Ser Asn Cys Phe 1959	1860 Gly Cys Ala Phe Lys 1940 Phe	Ser Glu Pro Ala 1925 Pro Gly	Gly Arg Cys 1910 Glu Gly Asn	Val Cys 1899 Val O Gly Tyr	Cys 1880 Gln Ser Cys Ala Leu 1960	1865 Val Ala Cys Val Gly 1945 Val	Asp Gly Pro Leu 1930 Ala Leu	Cys Phe Cys 191! Arg Ser Gly	Gln Val 1900 Pro Gly Cys Ser	His 1889 Ser D Leu Gly Glu Ser 1969	Asn Ser Ser Arg Arg 1950 Cys	Thr Arg Val Thr 1935 Cys	Glu Asp Pro 1920 Gln Ala Pro
Cys Gly Asp 1905 Ser Cys	Leu Ala 1890 Pro Asn Leu Gly	Pro 1879 His Ser Asn Cys Phe 1959 Cys	1860 Gly Cys Ala Phe Lys 1940 Phe	Ser Glu Pro Ala 1925 Pro Gly	Gly Arg Cys 1910 Glu Gly Asn	Val Cys 1899 Val O Gly Tyr	Cys 1880 Gln Ser Cys Ala Leu 1960 Asp	1865 Val Ala Cys Val Gly 1945 Val	Asp Gly Pro Leu 1930 Ala Leu	Cys Phe Cys 191! Arg Ser Gly	Gln Val 1900 Pro Gly Cys Ser	His 1889 Ser Leu Gly Glu Ser 1969 Phe	Asn Ser Ser Arg Arg 1950 Cys	Thr Arg Val Thr 1935 Cys O	Glu Asp Pro 1920 Gln Ala Pro
Cys Gly Asp 1905 Ser Cys Pro Cys	Leu Ala 1890 Pro Asn Leu Gly Asp 1970	Pro 1879 His Ser Asn Cys Phe 1959 Cys	1860 Gly Cys Ala Phe Lys 1940 Phe 5	Ser Glu Pro Ala 1925 Pro Gly Gly	Gly Arg Cys 1910 Glu Gly Asn Asn	Val Cys 1899 Val Cys Tyr Pro Gly 1979	Cys 1880 Gln Ser Cys Ala Leu 1960 Asp	1865 Val Ala Cys Val Gly 1945 Val Pro	Asp Gly Pro Leu 1930 Ala b Leu Asn	Cys Phe Cys 191! Arg Ser Gly Leu	Gln Val 1900 Pro Gly Cys Ser Leu 1980	His 1889 Ser Leu Gly Glu Ser 1969 Phe	Arg Arg 1950 Cys Ser	Thr Arg Val Thr 1935 Cys O Gln Asp	Glu Asp Pro 1920 Gln Ala Pro
Cys Gly Asp 1905 Ser Cys Pro Cys	Leu Ala 1890 Pro Asn Leu Gly Asp 1970 Pro	Pro 1879 His Ser Asn Cys Phe 1959 Cys	1860 Gly Cys Ala Phe Lys 1940 Phe 5	Ser Glu Pro Ala 1925 Pro Gly Gly	Gly Arg Cys 1910 Glu Gly Asn Asn	Val Cys 1895 Val Cys Gly Tyr Pro Gly 1975 Cys	Cys 1880 Gln Ser Cys Ala Leu 1960 Asp	1865 Val Ala Cys Val Gly 1945 Val Pro	Asp Gly Pro Leu 1930 Ala b Leu Asn	Cys Phe Cys 191! Arg Ser Gly Leu	Gln Val 1900 Pro Gly Cys Ser Leu 1980 Arg	His 1889 Ser Leu Gly Glu Ser 1969 Phe	Arg Arg 1950 Cys Ser	Thr Arg Val Thr 1935 Cys O Gln Asp	Glu Asp Pro 1920 Gln Ala Pro Cys
Cys Gly Asp 1905 Ser Cys Pro Cys Asp 1985	Leu Ala 1890 Pro Asn Leu Gly Asp 1970 Pro	Pro 1879 His Ser Asn Cys Phe 1959 Cys Leu	1860 Gly Cys Ala Phe Lys 1940 Phe 5	Ser Glu Pro Ala 1925 Pro Gly Gly Gly	Gly Cys 1910 Glu Gly Asn Asn Ala 1990	Val Cys 1899 Val Cyr Gly Pro Gly 1979 Cys	Cys 1880 Gln Ser Cys Ala Leu 1960 Asp Arg	1865 Val Ala Cys Val Gly 1945 Val Pro	Asp Gly Pro Leu 1930 Ala Leu Asn Cys	Cys Phe Cys 1915 Arg Ser Gly Leu Leu 1995	Gln Val 1900 Pro Gly Cys Ser Leu 1980 Arg	His 1889 Ser Leu Gly Glu Ser 1969 Phe	Asn Ser Ser Arg Arg 1950 Cys Ser Thr	Thr Arg Val Thr 1935 Cys O Gln Asp	Glu Asp Pro 1920 Gln  Ala Pro Cys Gly 2000

Pro	Gly	Asn	Cys	Thr	Arg	Cys	Asp	Cys	Thr	Pro	Cys	Gly	Thr	Glu	Ala
			2020	i				2025					2030		
Cys	Asp	Pro	His	Ser	Gly	His	Cys	Leu	Cys	Lys	Ala			Thr	Gly
		2035	<u> </u>				2040	)				2045	•		
Arg	Arg	Cys	Asp	Arg	Cys	Gln	Glu	Gly	His	Phe	Gly	Phe	Asp	Gly	Cys
	2050	)				2055	<u>;</u>				2060	)			
Gly	Gly	Cys	Arg	Pro	Cys	Ala	Cys	Gly	Pro	Ala	Ala	Glu	Gly	Ser	Glu
2065	•				2070	)				2075	•				2080
Cys	His	Pro	Gln	Ser	Gly	Gln	Cys	His	Cys	Arg	Pro	Gly	Thr	Met	Gly
				2085	•				2090	)				2095	<b>,</b>
Pro	Gln	Cys	Arg	Glu	Суѕ	Ala	Pro	Gly	Tyr	Trp	Gly	Leu	Pro	Glu	Gln
			2100	)				2105	<u>,</u>				2110	)	
Gly	Cys	Arg	Arg	Cys	Gln	Cys	Pro	Gly	Gly	Arg	Cys	Asp	Pro	His	Thr
		2115	5				2120	)				2125	5		
Gly	Arg	Cys	Asn	Cys	Pro	Pro	Gly	Leu	Ser	Gly	Glu	Arg	Cys	Asp	Thr
	2130	)				2135	5				2140	)			
Cys	Ser	Gln	Gln	His	Gln	Val	Pro	Val	Pro	Gly	Gly	Pro	Val	Gly	His
2145	5				2150	)				2155	5				2160
Ser	Ile	His	Cys	Glu	Val	Cys	Asp	His	Cys	Val	Val	Leu	Leu	Leu	Asp
				2165	5				2170	)				2175	5
Asp	Leu	Glu	Arg	Ala	Gly	Ala	Leu	Leu	Pro	Ala	Ile	His	Glu	Gln	Leu
			2180	)				2185	5				2190	)	
Arg	Gly	Ile	Asn	Ala	Ser	Ser	Met	Ala	Trp	Ala	Arg	Leu	His	Arg	Leu
		219	5				220	0				220	5		
Asn	Ala	Ser	Ile	Ala	Asp	Leu	Gln	Ser	Gln	Leu	Arg	Ser	Pro	Leu	Gly
	221	0				221	5				2220	)			
Pro	Arg	His	Glu	Thr	Ala	Gln	Gln	Leu	Glu	Val	Leu	Glu	Gln	Gln	Ser
222	5				223	0				223	5				2240
Thr	Ser	Leu	Gly	Gln	Asp	Ala	Arg	Arg	Leu	Gly	Gly	Gln	Ala	Gly	Ala
				2245	5				225	0				225	5
Pro	Arg	Pro	Pro	Arg	Ala	Pro	Gly	Gly	Phe	His	Leu	Tyr	Gln	Ala	Ser
			226	0				226	5				227	0	
Gln	Leu	Leu	Ala	Gly	Thr	Glu	Ala	Thr	Leu	Gly	His	Ala	Lys	Thr	Leu
		227	5				228	0				228	5		
Leu	Ala	Ala	Ile	Arg	Ala	Val	Asp	Arg	Thr	Leu	Ser	Glu	Leu	Met	Ser
	229	0				229	5				230	0			
Gln	Thr	Gly	His	Leu	Gly	Leu	Ala	Asn	Ala	Ser	Ala	Pro	Ser	Gly	Glu
230	5				231	0				231	5				2320
Gln	Leu	Leu	Arg	Thr	Leu	Ala	Glu	Val	Glu	Arg	Leu	Leu	Trp	Glu	Met
				232	5				233	0				233	5

Arg	Ala	Arg	Asp 2340		GLY	Ala	Pro	GIn 2345		Ala	Ala	GLu	A1a 2350	GIU )	Leu
Nlα	ЛΊα	ЛΙэ			Leu	Len	Δla			Gln	Glu	Gln	Len	Ser	Ser
Ala	Ala	2355		AIG	ьеи	пеп	2360		vai	GIII	GIU	2365		Der	Der
Leu	Trp	Glu	Glu	Asn	Gln	Ala	Leu	Ala	Thr	Gln	Thr	Arg	Asp	Arg	Leu
	2370	)				2375	5				2380	)			
Ala	Gln	His	Glu	Ala	Gly	Leu	Met	Asp	Leu	Arg	Glu	Ala	Leu	Asn	Arg
2385					2390			_		2395					2400
		Asp	Ala	Thr	Ara	Glu	Ala	Gln	Glu	Leu	Asn	Ser	Arg	Asn	Gln
				2405					2410					2415	
Glu	Δνα	T.011	Glu			T.e.11	Gln	Ara			Glu	Leu	Ser	Arg	
GIU	Arg	пец	2420		mia	БСС	0111	2425		01.11	014		2430		
7	71.	mb w			ת ה ה	Thr.	Lou			Nlα	Δra	Aen		Leu	Δlа
ASII	Ата			GIII	Ala	1111			Ala	Ala	ALG	2445		пец	AIG
_		2435		<b>.</b>	Ŧ		2440		7	C1-	71.0			C1.,	Ton
Ser			Arg	Leu	Leu			ьeu	ASP	GIII			GIU	Glu	пеп
	2450				_	2455			- 1		2460			<b>T</b>	C1
		Leu	Ala	Ala			Asp	GIŸ	Ата			Pro	Leu	Leu	Gln
2465					2470				_	2475			_		2480
Arg	Met	Gln	Thr	Phe	Ser	Pro	Ala	Gly			Leu	Arg	Leu	Val	
				2485					2490					2495	
Ala	Ala	Glu	Ala	His	Ala	Gln	Gln			Gln	Leu	Ala		Asn	Leu
			250					2509					2510		
Ser	Ser	Ile	Ile	Leu	Asp	Val	Asn	Gln	Asp	Arg	Leu	Thr	Gln	Arg	Ala
		251	5				2520	0				252	5		
Ile	Glu	Ala	Ser	Asn	Ala	Tyr	Ser	Arg	Ile	Leu	Gln	Ala	Val	Gln	Ala
	253	0				253	5				254	0			
Ala	Glu	Asp	Ala	Ala	Gly	Gln	Ala	Leu	Gln	Gln	Ala	Asp	His	Thr	Trp
254	5				255	)				255	5				2560
Ala	Thr	Val	Val	Arg	Gln	Gly	Leu	Val	Asp	Arg	Ala	Gln	Gln	Leu	Leu
				256	5				257	0				257	5
Ala	Asn	Ser	Thr	Ala	Leu	Glu	Glu	Ala	Met	Leu	Gln	Glu	Gln	Gln	Arg
			258					258					259		
Leu	Glv	Leu			Ala	Ala	Leu	Gln	Gly	Ala	Arg	Thr	Gln	Leu	Arg
	<i>1</i>	259		1			260		-		-	260			_
Asp	Val			Lvs	Lvs	Asp			Glu	Ala	His			Ala	Ala
	261			-1 -		261					262				
Gln			Leu	Ala	Met			Asp	Glu	Thr	Ser	Lvs	Lvs	Ile	Ala
262					263		<b>-</b>	I-		263		4	4		2640
		Lvc	7 <u>,</u> 1 ~	V = 1			Glu	د ۱ ۵	Gln			Ala	Thr	Ara	Val
1113	тта	пуз	,, <u>,</u> ,	264		1114	J_ U		265					265	
				204	J				200	_				_ 00	-

.

Gln	Ser	Gln	Leu	Gln	Ala	Met	Gln	Glu	Asn	Val	Glu	Arg	Trp	Gln	Gly
			2660	)				2665	5				2670	)	
Gln	Tyr	Glu	Gly	Leu	Arg	Gly	Gln	Asp	Leu	Gly	Gln	Ala	Val	Leu	Asp
		2675	5				2680	)				2685	5		
Ala	Gly	His	Ser	Val	Ser	Thr	Leu	Glu	Lys	Thr	Leu	Pro	Gln	Leu	Leu
	2690	) .				2695	5				2700	)			
Ala	Lys	Leu	Ser	Ile	Leu	Glu	Asn	Arg	Gly	Val	His	Asn	Ala	Ser	Leu
2705	5				2710	)				2715	5				2720
Ala	Leu	Ser	Ala	Ser	Ile	Gly	Arg	Val	Arg	Glu	Leu	Ile	Ala	Gln	Ala
				2725	5				2730	)				2735	5
Arg	Gly	Ala	Ala	Ser	Lys	Val	Lys	Val	Pro	Met	Lys	Phe	Asn	Gly	Arg
			2740	)				2745	5				2750	)	
Ser	Gly	Val	Gln	Leu	Arg	Thr	Pro	Arg	Asp	Leu	Ala	Asp	Leu	Ala	Ala
		2755	5				2760	)				2765	5		
Tyr	Thr	Ala	Leu	Lys	Phe	Tyr	Leu	Gln	Gly	Pro	Glu	Pro	Glu	Pro	Gly
	2770	)				2775	5				2780	)			
Gln	Gly	Thr	Glu	Asp	Arg	Phe	Val	Met	Tyr	Met	Gly	Ser	Arg	Gln	Ala
2785	5				2790	)				2795	5				2800
Thr	Gly	Asp	Tyr	Met	Gly	Val	Ser	Leu	Arg	Asp	Lys	Lys	Val	His	Trp
				2805	5				2810	)				2815	5
Val	Tyr	Gln	Leu	Gly	Glu	Ala	Gly	Pro	Ala	Val	Leu	Ser	Ile	Asp	Glu
			2820	)				2825	5				2830	)	
Asp	Ile	Gly	Glu	Gln	Phe	Ala	Ala	Val	Ser	Leu	Asp	Arg	Thr	Leu	Gln
		2835	5				2840	)				2845	5		
Phe	Gly	His	Met	Ser	Val	Thr	Val	Glu	Arg	Gln	Met	Ile	Gln	Glu	Thr
	2850	)				285	5				2860	)			
Lys	Gly	Asp	Thr	Val	Ala	Pro	Gly	Ala	Glu	Gly	Leu	Leu	Asn	Leu	Arg
2869	5				2870	)				2875	5				2880
Pro	Asp	Asp	Phe	Val	Phe	Tyr	Val	Gly	Gly	Tyr	Pro	Ser	Thr	Phe	Thr
				2885	5				2890	)				2899	5
Pro	Pro	Pro	Leu	Leu	Arg	Phe	Pro	Gly	Tyr	Arg	Gly	Cys	Ile	Glu	Met
			2900	)				290	5				2910	)	
Asp	Thr	Leu	Asn	Glu	Glu	Val	Val	Ser	Leu	Tyr	Asn	Phe	Glu	Arg	Thr
		2915	5				2920	)				292	5		
Phe	Gln	Leu	Asp	Thr	Ala	Val	Asp	Arg	Pro	Cys	Ala	Arg	Ser	Lys	Ser
	2930	)				293	5				2940	)			
Thr	Gly	Asp	Pro	Trp	Leu	Thr	Asp	Gly	Ser	Tyr	Leu	Asp	Gly	Thr	Gly
294	5				2950	)				2955	5				2960
Phe	Ala	Arg	Ile	Ser	Phe	Asp	Ser	Gln	Ile	Ser	Thr	Thr	Lys	Arg	Phe
				296	5				2970	0				297	5

Glu	Gln	Glu			Leu	Val	Ser	Tyr		Gly	Val	Leu			Leu
			2980					2985					2990		
Lys	Gln	Gln	Ser	Gln	Phe	Leu	Cys	Leu	Ala	Val	Gln	Glu	Gly	Ser	Leu
		2995	5				3000	)				3005	5		
Val	Leu	Leu	Tyr	Asp	Phe	Gly	Ala	Gly	Leu	Lys	Lys	Ala	Val	Pro	Leu
	3010	)				3015	5				3020	)			
Gln	Pro	Pro	Pro	Pro	Leu	Thr	Ser	Ala	Ser	Lys	Ala	Ile	Gln	Val	Phe
3025					3030					3035					3040
		C1	C1	Sar			Δra	Val	T.e.11			Val	Glu	Ara	Ala
Leu	Leu	сту	сту			гуу	ALG	Vai	3050		*****9		014	3055	
				3045			_	_			<b>01</b> .	Ť	7.1.		
Thr	Val	Tyr	Ser	Val	Glu	Gln	Asp	Asn		Leu	GIU	Leu			Ala
			3060					3065					3070		
Tyr	Tyr	Leu	Gly	Gly	Val	Pro	Pro	Asp	Gln	Leu	Pro	Pro	Ser	Leu	Arg
	•	307	5				3080	)				3085	5		
Ara	Leu	Phe	Pro	Thr	Gly	Gly	Ser	Val	Arg	Gly	Cys	Val	Lys	Gly	Ile
	309				_	309					310				
T			Glv	T.ve	Tur			Leu	Lvs	Ara	Leu	Asn	Thr	Thr	Gly
		цец	Gry	цуз	311				-1-	311					3120
310		_					70	T	Tan			Λκα	Δ1 a	Met	Thr
Val	Ser	Ala	Gly			Ата	Asp	Leu			СТУ	ALG	AIa	313	
				312					313			_			
Phe	His	Gly	His	Gly	Phe	Leu	Arg	Leu	Ala	Leu	Ser	Asn			Pro
			314					314					315		
Leu	Thr	Gly	Asn	Val	Tyr	Ser	Gly	Phe	Gly	Phe	His	Ser	Ala	Gln	Asp
		315					316					316			
Ser	Ala	Leu	Leu	Tyr	Tyr	Arg	Ala	Ser	Pro	Asp	Gly	Leu	Cys	Gln	Val
552	317			-	-	317					318				
Com			Gln	Glv	Δra			Leu	Gln	Leu	Leu	Arq	Thr	Glu	Val
		GIU	GIII	СТУ	319			200	0	319					3200
318		_					70	C1	71.			Тиг	. V=1	Δla	
Lys	Thr	Gln	Ala			Ala	Asp	о Сту			UTS	туг	Val	321	Phe
				320					321			_			
Tyr	Ser	Asr	Ala	Thr	Gly	Val	Trp	Leu	Туг	. Val	Asp	Asp			Gln
			322					322					323		
Glr	Met	Lys	Pro	His	Arg	Gly	/ Pro	Pro	Pro	Glu	Leu	. Gln	Pro	Gln	Pro
		323					324					324			
Gli	ı Glı			Arc	ı Leu	ı Leı	ı Leu	ı Gly	Gly	/ Leu	Pro	Glu	ı Ser	Gly	Thr
GIC			, , , ,	, ,,,,,	,	325		-	-	,	326				
	325		D1					Sor	- Aer	n Wal			Glr	Arc	J Leu
		c Asr	ı rne	e ser			> TT#	SOFI	. ASI	327		, ,,,,			3280
326					327		_		~3			. т	. (1-		
Lei	ı Gl	y Pro	o Glr	n Arç	y Val	L Phe	e Asr	Leu			n Ası	л тег	ı GTZ		val
				328	35				329	90				329	15

Asn	Val	Ser	Thr	Gly	Cys	Ala	Pro	Ala	Leu	Gln	Ala	Gln	Thr	Pro	Gly
			3300	)				3305	i				3310	,	
Leu	Gly	Pro	Arg	Gly	Leu	Gln	Ala	Thr	Ala	Arg	Lys	Ala	Ser	Arg	Arg
		3315	5				3320	)				3325	5		
Ser	Arg	Gln	Pro	Ala	Arg	His	Pro	Ala	Cys	Met	Leu	Pro	Pro	His	Leu
	3330	)				3335	5				3340	)			
Arg	Thr	Thr	Arg	Asp	Ser	Tyr	Gln	Phe	Gly	Gly	Ser	Leu	Ser	Ser	His
3345	<b>,</b>				3350	)				3355	5				3360
Leu	Glu	Phe	Val	Gly	Ile	Leu	Ala	Arg	His	Arg	Asn	Trp	Pro	Ser	Leu
				3365				, -	3370					3375	
Ser	Met	His	Val	Leu	Pro	Arg	Ser	Ser	Arg	Gly	Leu	Leu	Leu	Phe	Thr
			3380			_		3385		_			3390		
Ala	Ara	Len			Glv	Ser	Pro			Ala	Leu	Phe	Leu	Ser	Asn
	9	3395			2		3400					3405			
Gly	Hie			Δla	Gln	Met			Leu	Glv	Thr			Arg	Ala
Gry	3410		Vai	riza	0111	3415		017		1	3420			5	
Cln			Gln	Δκα	Sar			Glv	Ara	Tro			Val	Ser	Val
		Arg	GIII	Arg	3430		110	Cry	1119	3435		_,0			3440
3425		C1	T 110	λαν			Tou	Lou	Val			Glv	Δla	Arg	
Arg	irb	GIU	гуз			116	ьеu	пеа	3450		АЗР	GLY	mu	3455	
	_	<b>G</b> 1	G1	344		114 -	7	C1 =			C1.,	712	Clu		
Trp	Ser	Gin			Pro	HIS	Arg			GIII	GIY	Ата	3470	His	110
			3460		_,		0.1	3465		D	77-	0			Cor
				Leu	Phe	vaı	GTĀ	СТА	ьeu	Pro	АТА	ser	ser	His	ser
GIN	Pro											240			
		347.	5				348	)	_			348		7	T
	Lys	347. Leu	5			Val	Gly	)	Ser	Gly		Val		Arg	Leu
Ser	Lys 349	347. Leu 0	5 Pro	Val	Thr	Val 349	Gly 5	) Phe			350	Val O	Lys		
Ser Arg	Lys 349 Leu	347. Leu 0	5 Pro	Val	Thr	Val 349 Leu	Gly 5	) Phe		Thr	350 Arg	Val O	Lys		Val
Ser Arg 3505	Lys 349 Leu	347 Leu O His	Pro Gly	Val Arg	Thr Pro	Val 349 Leu 0	Gly 5 Gly	Phe Ala	Pro	Thr	350 Arg 5	Val ) Met	Lys Ala	Gly	Val 3520
Ser Arg 3505	Lys 349 Leu	347 Leu O His	Pro Gly	Val Arg	Thr Pro	Val 349 Leu 0	Gly 5 Gly	Phe Ala	Pro Ala	Thr 3515 Gly	350 Arg 5	Val ) Met	Lys Ala	Gly Pro	Val 3520 Gly
Ser Arg 3509 Thr	Lys 349 Leu Pro	347 Leu O His Cys	Pro Gly Ile	Val Arg Leu 352	Thr Pro 351 Gly	Val 3499 Leu O Pro	Gly 5 Gly Leu	Phe Ala Glu	Pro Ala 3530	Thr 351 Gly	3500 Arg 5 Leu	Val ) Met Phe	Lys Ala Phe	Gly Pro 3535	Val 3520 Gly 5
Ser Arg 3509 Thr	Lys 349 Leu Pro	347 Leu O His Cys	Pro Gly Ile	Val Arg Leu 352	Thr Pro 351 Gly	Val 3499 Leu O Pro	Gly 5 Gly Leu	Phe Ala Glu	Pro Ala 3530	Thr 351 Gly	3500 Arg 5 Leu	Val ) Met Phe	Lys Ala Phe	Gly Pro 3535	Val 3520 Gly
Ser Arg 3505 Thr	Lys 349 Leu Pro	347: Leu O His Cys	Pro Gly Ile Val 354	Val Arg Leu 352 Ile	Thr Pro 351 Gly 5	Val 349 Leu O Pro	Gly 5 Gly Leu Asp	Phe Ala Glu Leu 354	Pro Ala 3530 Pro	Thr 3519 Gly O	3500 Arg 5 Leu Ala	Val ) Met Phe Thr	Lys Ala Phe Leu 3550	Gly Pro 3533 Pro	Val 3520 Gly 5 Asp
Ser Arg 3505 Thr	Lys 349 Leu Pro	347: Leu O His Cys	Pro Gly Ile Val 354	Val Arg Leu 352 Ile	Thr Pro 351 Gly 5	Val 349 Leu O Pro	Gly 5 Gly Leu Asp	Phe Ala Glu Leu 354	Pro Ala 3530 Pro	Thr 3519 Gly O	3500 Arg 5 Leu Ala	Val ) Met Phe Thr	Lys Ala Phe Leu 3550	Gly Pro 3533 Pro	Val 3520 Gly 5
Ser Arg 3505 Thr	Lys 349 Leu Pro	347: Leu O His Cys	Pro Gly Ile Val 354 Glu	Val Arg Leu 352 Ile	Thr Pro 351 Gly 5	Val 349 Leu O Pro	Gly 5 Gly Leu Asp	Phe Ala Glu Leu 354	Pro Ala 3530 Pro	Thr 3519 Gly O	3500 Arg 5 Leu Ala	Val ) Met Phe Thr	Lys Ala Phe Leu 3550	Gly Pro 3533 Pro	Val 3520 Gly 5 Asp
Ser Arg 3505 Thr Ser Val	Lys 349 Leu Pro Gly	347 Leu O His Cys Gly Leu 355	Pro Gly Ile Val 354 Glu 5	Val Arg Leu 352 Ile 0 Leu	Thr Pro 351 Gly Thr	Val 3499 Leu O Pro Leu Val	Gly Gly Leu Asp Arg 356	Phe Ala Glu Leu 3549 Pro	Pro Ala 3530 Pro 5	Thr 351: Gly O Gly Ala	3500 Arg 5 Leu Ala Val	Val  Met  Phe  Thr  356	Lys Ala Phe Leu 3550 Gly	Gly Pro 3533 Pro	Val 3520 Gly 5 Asp
Ser Arg 3505 Thr Ser Val	Lys 349 Leu Pro Gly	347 Leu O His Cys Gly Leu 355 Leu	Pro Gly Ile Val 354 Glu 5	Val Arg Leu 352 Ile 0 Leu	Thr Pro 351 Gly Thr	Val 3499 Leu O Pro Leu Val	Gly Gly Leu Asp Arg 356 Thr	Phe Ala Glu Leu 3549 Pro	Pro Ala 3530 Pro 5	Thr 351: Gly O Gly Ala	3500 Arg 5 Leu Ala Val	Val  Met  Phe  Thr  Thr  356 Gln	Lys Ala Phe Leu 3550 Gly	Gly Pro 3539 Pro 0	Val 3520 Gly 5 Asp
Ser Arg 3505 Thr Ser Val	Lys 349 Leu Fro Gly Gly His 357	347 Leu O His Cys Gly Leu 355 Leu	Fro Gly Ile Val 354 Glu 5 Gly	Val Arg Leu 352 Ile O Leu Gln	Thr Pro 351 Gly Thr Glu Ala	Val 3499 Leu O Pro Leu Val Arg 357	Gly  Gly  Leu  Asp  Arg  356  Thr	Phe Ala Glu Leu 3549 Pro Pro	Pro Ala 3530 Pro Leu Pro	Thr 351: Gly O Gly Ala	3500 Arg 5 Leu Ala Val Leu 358	Val  Met  Phe  Thr  Thr  356  Gln	Lys Ala Phe Leu 3550 Gly Leu	Gly Pro 3535 Pro Leu Gln	Val 3520 Gly 5 Asp
Ser Arg 3505 Thr Ser Val	Lys 349 Leu Pro Gly Gly His 357 Glu	347 Leu O His Cys Gly Leu 355 Leu	Fro Gly Ile Val 354 Glu 5 Gly	Val Arg Leu 352 Ile O Leu Gln	Thr Pro 351 Gly Thr Glu Ala	Val 3499 Leu O Pro Leu Val Arg 357 Leu	Gly  Gly  Leu  Asp  Arg  356  Thr	Phe Ala Glu Leu 3549 Pro Pro	Pro Ala 3530 Pro Leu Pro	Thr 351: Gly O Gly Ala	3500 Arg 5 Leu Ala Val Leu 358 Gly	Val  Met  Phe  Thr  Thr  356  Gln	Lys Ala Phe Leu 3550 Gly Leu	Gly Pro 3535 Pro Leu Gln	Val 3520 Gly 5 Asp Ile Val
Ser Arg 3509 Thr Ser Val Phe Thr 3589	Lys 349 Leu Fro Gly Gly His 357 Glu	347 Leu O His Cys Gly Leu 355 Leu O	Pro Gly Ile Val 354 Glu 5 Gly Gln	Val Arg Leu 352 Ile O Leu Gln Val	Thr Pro 351 Gly Thr Glu Ala Leu 359	Val 3499 Leu 0 Pro Leu Val Arg 357 Leu 0	Gly  Gly  Leu  Asp  Arg  356  Thr  Arg	Phe Ala Glu Leu 3549 Pro Pro Ala	Pro Ala 3530 Pro Leu Pro Asp	Thr 351: Gly Gly Ala Tyr Asp 359	3500 Arg 5 Leu Ala Val Leu 358 Gly	Val  Met  Phe  Thr  356  Gln  O  Ala	Lys Ala Phe Leu 3550 Gly Leu Gly	Gly Pro 3535 Pro Leu Gln Glu	Val 3520 Gly 5 Asp Ile Val

Arg Leu Ala Val Met Lys Ser Gly Asn Val Leu Arg Leu Glu Val Asp 3625 3620 Ala Gln Ser Asn His Thr Val Gly Pro Leu Leu Ala Ala Ala Gly 3640 3635 Ala Pro Ala Pro Leu Tyr Leu Gly Gly Leu Pro Glu Pro Met Ala Val 3660 3655 Gln Pro Trp Pro Pro Ala Tyr Cys Gly Cys Met Arg Arg Leu Ala Val 3675 3670 3665 Asn Arg Ser Pro Val Ala Met Thr Arg Ser Val Glu Val His Gly Ala 3690 Val Gly Ala Ser Gly Cys Pro Ala Ala 3700 <210> 31 <211> 3696 <212> PRT <213> Homo sapiens <400> 31 Met Ala Lys Arg Leu Cys Ala Gly Ser Ala Leu Cys Val Arg Gly Pro 10 Arg Gly Pro Ala Pro Leu Leu Leu Val Gly Leu Ala Leu Leu Gly Ala 25 Ala Arg Ala Arg Glu Glu Ala Gly Gly Phe Ser Leu His Pro Pro Tyr Phe Asn Leu Ala Glu Gly Ala Arg Ile Ala Ala Ser Ala Thr Cys 55 50 Gly Glu Glu Ala Pro Ala Arg Gly Ser Pro Arg Pro Thr Glu Asp Leu 75 70 Tyr Cys Lys Leu Val Gly Gly Pro Val Ala Gly Gly Asp Pro Asn Gln 90 85 Thr Ile Arg Gly Gln Tyr Cys Asp Ile Cys Thr Ala Ala Asn Ser Asn 110 105 Lys Ala His Pro Ala Ser Asn Ala Ile Asp Gly Thr Glu Arg Trp Trp 120 115 Gln Ser Pro Pro Leu Ser Arg Gly Leu Glu Tyr Asn Glu Val Asn Val 140 130 Thr Leu Asp Leu Gly Gln Val Phe His Val Ala Tyr Val Leu Ile Lys

150

145

155

Phe	Ala	Asn	Ser	Pro 165	Arg	Pro	Asp	Leu	Trp 170	Val	Leu	Glu	Arg	Ser 175	Met
Asp	Phe	Gly	Arg 180	Thr	Tyr	Gln	Pro	Trp 185	Gln	Phe	Phe	Ala	Ser 190	Ser	Lys
Arg	Asp	Cys 195	Leu	Glu	Arg	Phe	Gly 200	Pro	Gln	Thr	Leu	Glu 205	Arg	Ile	Thr
Arg	Asp 210	Asp	Ala	Ala	Ile	Cys 215	Thr	Thr	Glu	Tyr	Ser 220	Arg	Ile	Val	Pro
Leu 225	Glu	Asn	Gly	Glu	Ile 230	Val	Val	Ser	Leu	Val 235	Asn	Gly	Arg	Pro	Gly 240
Ala	Met	Asn	Phe	Ser 245	Tyr	Ser	Pro	Leu	Leu 250	Arg	Glu	Phe	Thr	Lys 255	Ala
Thr	Asn	Val	Arg 260	Leu	Arg	Phe	Leu	Arg 265	Thr	Asn	Thr	Leu	Leu 270	Gly	His
Leu	Met	Gly 275	Lys	Ala	Leu	Arg	Asp 280	Pro	Thr	Val	Thr	Arg 285	Arg	Tyr	Tyr
Tyr	Ser 290	Ile	Lys	Asp	Ile	Ser 295	Ile	Gly	Gly	Arg	Cys 300	Val	Cys	His	Gly
His 305	Ala	Asp	Ala	Cys	Asp 310	Ala	Lys	Asp	Pro	Thr 315	Asp	Pro	Phe	Arg	Leu 320
Gln	Cys	Thr	Cys	Gln 325	His	Asn	Thr	Cys	Gly 330	Gly	Thr	Cys	Asp	Arg 335	Cys
Cys	Pro	Gly	Phe 340	Asn	Gln	Gln	Pro	Trp 345	Lys	Pro	Ala	Thr	Ala 350	Asn	Ser
Ala	Asn	Glu 355	Суѕ	Gln	Ser	Cys	Asn 360	Cys	Tyr	Gly	His	Ala 365	Thr	Asp	Cys
Tyr	Tyr 370	Asp	Pro	Glu	Val	Asp 375	Arg	Arg	Arg	Ala	Ser 380	Gln	Ser	Leu	Asp
Gly 385	Thr	Tyr	Gln	Gly	Gly 390	Gly	Val	Cys	Ile	Asp 395	Cys	Gln	His	His	Thr 400
Thr	Gly	Val	Asn	Cys 405	Glu	Arg	Cys	Leu	Pro 410	Gly	Phe	Tyr	Arg	Ser 415	Pro
Asn	His	Pro	Leu 420	Asp	Ser	Pro	His	Val 425	Cys	Arg	Arg	Cys	Asn 430	Cys	Glu
Ser	Asp	Phe 435	Thr	Asp	Gly	Thr	Cys 440	Glu	Asp	Leu	Thr	Gly 445	Arg	Cys	Tyr
Cys	Arg 450	Pro	Asn	Phe	Ser	Gly 455	Glu	Arg	Cys	Asp	Val 460	Cys	Ala	Glu	Gly
Phe 465	Thr	Gly	Phe	Pro	Ser 470	Cys	Tyr	Pro	Thr	Pro 475	Ser	Ser	Ser	Asn	Asp 480

.

Thr	Arg	Glu	GIn	Val 485	Leu	Pro	Ата	GTÀ	490	TTE	vaı	Asn	Cys	495	Cys
Ser	Ala	Ala	Gly 500	Thr	Gln	Gly	Asn	Ala 505	Cys	Arg	Lys	Asp	Pro 510	Arg	Val
Gly	Arg	Cys 515		Cys	Lys	Pro	Asn 520		Gln	Gly	Thr	His		Glu	Leu
Cys	Ala 530		Gly	Phe	Tyr	Gly 535	Pro	Gly	Cys	Gln	Pro 540	Cys	Gln	Cys	Ser
Ser 545	Pro	Gly	Val	Ala	Asp 550	Asp	Arg	Cys	Asp	Pro 555	Asp	Thr	Gly	Gln	Cys 560
Arg	Cys	Arg	Val	Gly 565	Phe	Glu	Gly	Ala	Thr 570	Cys	Asp	Arg	Cys	Ala 575	Pro
Gly	Tyr	Phe	His 580	Phe	Pro	Leu	Cys	Gln 585	Leu	Cys	Gly	Cys	Ser 590	Pro	Ala
Gly	Thr	Leu 595	Pro	Glu	Gly	Cys	Asp 600	Glu	Ala	Gly	Arg	Cys 605	Leu	Cys	Gln
Pro	Glu 610	Phe	Ala	Gly	Pro	His 615	Cys	Asp	Arg	Cys	Arg 620	Pro	Gly	Tyr	His
Gly 625	Phe	Pro	Asn	Cys	Gln 630	Ala	Суѕ	Thr	Cys	Asp. 635	Pro	Arg	Gly	Ala	Leu 640
Asp	Gln	Leu	Cys	Gly 645	Ala	Gly	Gly	Leu	Cys 650	Arg	Cys	Arg	Pro	Gly 655	Tyr
Thr	Gly	Thr	Ala 660	Cys	Gln	Glu	Cys	Ser 665	Pro	Gly	Phe	His	Gly 670	Phe	Pro
Ser	Cys	Val 675	Pro	Cys	His	Cys	Ser 680	Ala	Glu	Gly	Ser	Leu 685	His	Ala	Ala
Cys	Asp 690	Pro	Arg	Ser	Gly	Gln 695	Cys	Ser	Cys	Arg	Pro 700	Arg	Val	Thr	Gly
Leu 705	Arg	Cys	Asp	Thr	Cys 710	Val	Pro	Gly	Ala	Tyr 715	Asn	Phe	Pro	Tyr	Cys 720
Glu	Ala	Gly	Ser	Cys 725	His	Pro	Ala	Gly	Leu 730		Pro	Val	Asp	Pro 735	Ala
Leu	Pro	Glu	Ala 740	Gln	Val	Pro	Cys	Met 745	Cys	Arg	Ala	His	Val 750	Glu	Gly
Pro	Ser	Cys 755	Asp	Arg	Суз	Lys	Pro 760	Gly	Phe	Trp	Gly	Leu 765		Pro	Ser
Asn	Pro 770		Gly	Суз	Thr	Arg 775	Cys	Ser	Cys	Asp	Leu 780		Gly	Thr	Leu
Gly 785	Gly	Val	Ala	Glu	Cys 790		Pro	Gly	Thr	Gly 795		Cys	Phe	Cys	Lys 800

Pro	HIS	vaı	Cys	-	GIN	Ala	Cys	Ата		Cys	ьуѕ	ASP	GTĀ		rne
<b>0.</b> 3		_	<b>01</b>	805			D1	G1	810	70	0	C	7	815	7
GLY	Leu	Asp		Ala	Asp	Tyr	Phe		Cys	Arg	Ser	Cys		Cys	Asp
			820	_			_	825		_	_		830		_
Ile	Gly		Ala	Leu	GLy	Gln		Cys	Glu	Pro	Arg		GLY	val	Cys
		835					840					845			_
Arg	_	Arg	Pro	Asn	Thr		Gly	Pro	Thr	Cys		Glu	Pro	Ala	Arg
	850					855					860				
Asp	His	Tyr	Leu	Pro		Leu	His	His	Leu	Arg	Leu	Glu	Leu	Glu	
865					870					875					880
Ala	Ala	Thr	Pro		Gly	His	Ala	Val	Arg	Phe	Gly	Phe	Asn		Leu
				885					890					895	
Glu	Phe	Glu	Asn	Phe	Ser	Trp	Arg	Gly	Tyr	Ala	Gln	Met	Ala	Pro	Val
			900					905					910		
Gln	Pro	Arg	Ile	Val	Ala	Arg	Leu	Asn	Leu	Thr	Ser	Pro	Asp	Leu	Phe
		915					920					925			
Trp	Leu	Val	Phe	Arg	Tyr	Val	Asn	Arg	Gly	Ala	Met	Ser	Val	Ser	Gly
	930					935					940				
Arg	Val	Ser	Val	Arg	Glu	Glu	Gly	Arg	Ser	Ala	Thr	Cys	Ala	Asn	Cys
945					950					955					960
Thr	Ala	Gln	Ser	Gln	Pro	Val	Ala	Phe	Pro	Pro	Ser	Thr	Glu	Pro	Ala
				965					970					975	
Phe	Ile	Thr	Val	Pro	Gln	Arg	Gly	Phe	Gly	Glu	Pro	Phe	Val	Leu	Asn
			980					985					990		
Pro	Gly	Thr	Trp	Ala	Leu	Arg	Val	Glu	Ala	Glu	Gly	Val	Leu	Leu	Asp
		995					1000	כ				1009	5		
Tyr	Val	Val	Leu	Leu	Pro	Ser	Ala	Tyr	Tyr	Glu	Ala	Ala	Leu	Leu	Gln
	1010	)				1015	5				1020	)			
Leu	Arg	Val	Thr	Glu	Ala	Cys	Thr	Tyr	Arg	Pro	Ser	Ala	Gln	Gln	Ser
1025	5				1030	)		,		1035	5				1040
Gly	Asp	Asn	Cys	Leu	Leu	Tyr	Thr	His	Leu	Pro	Leu	Asp	Gly	Phe	Pro
				1045	5				1050	)				1055	5
Ser	Ala	Ala	Gly	Leu	Glu	Ala	Leu	Cys	Arg	Gln	Asp	Asn	Ser	Leu	Pro
			1060	)				1065	5				1070	)	
Arg	Pro	Cys	Pro	Thr	Glu	Gln	Leu	Ser	Pro	Ser	His	Pro	Pro	Leu	Ile
_		1075	5				1080	)				1085	5		
Thr	Cys	Thr	Gly	Ser	Asp	Val	Asp	Val	Gln	Leu	Gln	Val	Ala	Val	Pro
	1090		-		_	1095					1100				
Gln			Arq	Tyr	Ala			Val	Glu	Tyr			Glu	Asp	Ala
1105		-	,	-	1110					111				-	1120

.

Arg	Gln	Glu	Val	Gly	Val	Ala	Val	His	Thr	Pro	Gln	Arg	Ala	Pro	Gln
				1125	5				1130	)				1135	
Gln	Gly	Leu	Leu	Ser	Leu	His	Pro	Cys	Leu	Tyr	Ser	Thr	Leu	Cys	Arg
			1140	)				1145	5				1150	)	
Gly	Thr	Ala	Arg	Asp	Thr	Gln	Asp	His	Leu	Ala	Val	Phe	His	Leu	Asp
		1155	5				1160	)				1165	5		
Ser	Glu	Ala	Ser	Val	Arg	Leu	Thr	Ala	Glu	Gln	Ala	Arg	Phe	Phe	Leu
	1170	)				1175	5				1180	)			
His	Gly	Val	Thr	Leu	Val	Pro	Ile	Glu	Glu	Phe	Ser	Pro	Glu	Phe	Val
1185	5				1190	)				1195	5				1200
Glu	Pro	Arg	Val	Ser	Cys	Ile	Ser	Ser	His	Gly	Ala	Phe	Gly	Pro	Asn
				1205	5				1210	0				1215	•
Ser	Ala	Ala	Cys	Leu	Pro	Ser	Arg	Phe	Pro	Lys	Pro	Pro	Gln	Pro	Ile
			122					122					1230		
Ile	Leu	Arg	Asp	Cys	Gln	Val	Ile	Pro	Leu	Pro	Pro	Gly	Leu	Pro	Leu
		123	5				124	0				1245	5		
Thr	His	Ala	Gln	Asp	Leu	Thr	Pro	Ala	Met	Ser	Pro	Ala	Gly	Pro	Arg
	125					125					126				
Pro	Arg	Pro	Pro	Thr	Ala	Val	Asp	Pro	Asp	Ala	Glu	Pro	Thr	Leu	Leu
126					127					127					1280
Arq	Glu	Pro	Gln	Ala	Thr	Val	Val	Phe	Thr	Thr	His	Val	Pro	Thr	Leu
				128					129					1295	
Gly	Arg	Tyr	Ala	Phe	Leu	Leu	His	Gly	Tyr	Gln	Pro	Ala	His	Pro	Thr
_			130					130					131		
Phe	Pro	Val	Glu	Val	Leu	Ile	Asn	Ala	Gly	Arg	Val	Trp	Gln	Gly	His
		131					132					132			
Ala	Asn	Ala	Ser	Phe	Cys	Pro	His	Gly	Tyr	Gly	Cys	Arg	Thr	Leu	Val
	133	0				133	5				134	0			
Val	Cys	Glu	Gly	Gln	Ala	Leu	Leu	Asp	Val	Thr	His	Ser	Glu	Leu	Thr
134					135					135					1360
Val	Thr	Val	Arg	Val	Pro	Lys	Gly	Arg	Trp	Leu	Trp	Leu	Asp	Tyr	Val
				136					137					137	
Leu	Val	Val	Pro	Glu	Asn	Val	Tyr	Ser	Phe	Gly	Tyr	Leu	Arg	Glu	Glu
			138	0				138	5				139	0	
Pro	Leu	Asp	Lys	Ser	Tyr	Asp	Phe	Ile	Ser	His	Cys	Ala	Ala	Gln	Gly
		139					140					140			
Tyr	His	Ile	Ser	Pro	Ser	Ser	Ser	Ser	Leu	Phe	Cys	Arg	Asn	Ala	Ala
-	141					141					142				
Ala	Ser	Leu	Ser	Leu	Phe	. Tyr	Asn	Asn	Gly	, Ala	Arg	Pro	Cys	Gly	Cys
142					143					143					1440

His	Glu	Val	Gly	Ala	Thr	Gly	Pro	Thr	Cys	Glu	Pro	Phe	Gly	Gly	Gln
				1445					1450					1455	
Cys	Pro	Cys	His	Ala	His	Val	Ile	Gly	Arg	Asp	Cys	Ser	Arg	Cys	Ala
			1460	)				1465	5				1470	)	
Thr	Gly	Tyr	Trp	Gly	Phe	Pro	Asn	Cys	Arg	Pro	Cys	Asp	Cys	Gly	Ala
	_	1475					1480					1485			
Arq	Leu	Cys	Asp	Glu	Leu	Thr	Gly	Gln	Cys	Ile	Cys	Pro	Pro	Arg	Thr
_	1490	_	_			1495					1500				
Ile	Pro	Pro	Asp	Cys	Leu	Leu	Cys	Gln	Pro	Gln	Thr	Phe	Gly	Cys	His
1505			_		1510					1515					1520
Pro	Leu	Val	Gly	Cys	Glu	Glu	Cys	Asn	Cys	Ser	Gly	Pro	Gly	Ile	Gln
			_	1525					1530					1535	
Glu	Leu	Thr	Asp	Pro	Thr	Cys	Asp	Thr	Asp	Ser	Gly	Gln	Cys	Lys	Cys
			1540					1545					1550		
Arg	Pro	Asn	Val	Thr	Gly	Arg	Arg	Cys	Asp	Thr	Cys	Ser	Pro	Gly	Phe
		1555	5				1560	)				1569	5		
His	Gly	Tyr	Pro	Arg	Cys	Arg	Pro	Cys	Asp	Cys	His	Glu	Ala	Gly	Thr
	1570					1575					1580				
Ala	Pro	Gly	Val	Cys	Asp	Pro	Leu	Thr	Gly	Gln	Cys	Tyr	Cys	Lys	Glu
158					1590					159					1600
Asn	Val	Gln	Gly	Pro	Lys	Cys	Asp	Gln	Cys	Ser	Leu	Gly	Thr	Phe	Ser
				160	5				161	0				1615	5
Leu	Asp	Ala	Ala	Asn	Pro	Lys	Gly	Cys	Thr	Arg	Cys	Phe	Cys	Phe	Gly
			162	0				162	5				163	0	
Ala	Thr	Glu	Arg	Cys	Arg	Ser	Ser	Ser	Tyr	Thr	Arg	Gln	Glu	Phe	Val
		163					164					164			
Asp	Met	Glu	Gly	Trp	Val	Leu	Leu	Ser	Thr	Asp	Arg	Gln	Val	Val	Pro
	165	0				165	5				166	0			
His	Glu	Arg	Gln	Pro	Gly	Thr	Glu	Met	Leu	Arg	Ala	Asp	Leu	Arg	His
166	5				167	0				167	5				1680
Val	Pro	Glu	Ala	Val	Pro	Glu	Ala	Phe	Pro	Glu	Leu	Tyr	Trp	Gln	Ala
				168	5				169	0				169	5
Pro	Pro	Ser	Tyr	Leu	Gly	Asp	Arg	Val	Ser	Ser	Tyr	Gly	Gly	Thr	Leu
			170	0				170	5				171	0	
Arg	Tyr	Glu	Leu	His	Ser	Glu	Thr	Gln	Arg	Gly	Asp	Val	Phe	Val	Pro
		171	5				172	0				172	5		
Met	Glu	Ser	Arg	Pro	Asp	Val	Val	Leu	Gln	Gly	Asn	Gln	Met	Ser	Ile
	0														
	173	0				173	5				174	0			
Thr	173		Glu	Pro	Ala			Thr	Pro	Gly			His	Arg	Gly

The Val Ser Arg Glu Glu Leu Met Met Val Leu Ala Ser Leu Glu Glu Glu Leu Met Met Val Leu Ala Ser Leu Glu Glu Glu Leu Met Met Val Leu Ala Ser Leu Glu Glu Glu Leu Glu 1780   1785   1790    Leu Gln Ile Arg Ala Leu Phe Ser Gln Ile Ser Ser Ala Val Phe Leu 1795   1800   1805   1805    Arg Arg Val Ala Leu Glu Val Ala Ser Pro Ala Gly Gln Gly Ala Leu 1810   1815   1820    Ala Ser Asn Val Glu Leu Cys Leu Cys Pro Ala Ser Tyr Arg Gly Asp 1825   1830   1840    Ser Cys Gln Glu Cys Ala Pro Gly Phe Tyr Arg Asp Val Lys Gly Leu 1845   1850   1855    Phe Leu Gly Arg Cys Val Pro Cys Gln Cys His Gly His Ser Asp Arg 1860   1860   1870    Cys Leu Pro Gly Ser Gly Val Cys Val Asp Cys Gln His Asn Thr Glu 1875   1880   1885    Gly Ala His Cys Glu Arg Cys Gln Ala Gly Phe Val Ser Ser Arg Asp 1890   1895   1900    Asp Pro Ser Ala Pro Cys Val Ser Cys Pro Cys Pro Leu Ser Val Pro 1905   1910   1915   1920    Ser Asn Asn Phe Ala Glu Gly Cys Val Leu Arg Gly Gly Arg Thr Gln 1925   1930   1935    Cys Leu Cys Lys Pro Gly Tyr Ala Gly Ala Ser Cys Glu Arg Cys Ala 1940   1945   1950    Pro Gly Phe Fe Gly Asn Pro Leu Val Leu Gly Ser Ser Cys Gln Pro 1955   1960   1965    Cys Asp Cys Ser Gly Asn Gly Asp Pro Asn Leu Leu Phe Ser Asp Cys 1970   1975   1980    Asp Pro Leu Thr Gly Ala Cys Arg Gly Cys Leu Arg His Thr Thr Gly 1985   1990   1995   1990    Asp Pro Leu Thr Gly Ala Cys Arg Gly Cys Leu Arg His Thr Thr Gly 1985   1990   1995   1990   1995   2000    Pro Arg Cys Glu Ile Cys Ala Pro Gly Phe Tyr Gly Asn Ala Leu Leu 2005   2010   2015    Pro Gly Asp Cys Thr Arg Cys Asp Cys Thr Pro Cys Gly Thr Glu Ala 2020   2025   2035   2035    Cys Asp Pro His Ser Gly His Cys Leu Cys Lys Ala Gly Val Thr Gly 2035   2045   2045   2045    Cys Asp Pro His Ser Gly His Cys Leu Cys Lys Ala Gly Val Thr Gly 2035   2045   2045   2045    Cys Asp Pro His Ser Gly His Cys Leu Cys Lys Ala Gly Val Thr Gly 2035   2045   2045    Cys Asp Pro His Ser Gly His Cys Leu Cys Lys Ala Gly Val Thr Gly 2045   2045   2045    Cys Asp Pro His Ser Gly His Cys Leu Cys Lys Ala Gly Val Thr Gly 2045   2045	Gln	Leu	Gln	Leu	Val	Glu	Gly	Asn	Phe	Arg	His	Thr	Glu	Thr	Arg	Asn
Leu Gln Ile Arg Ala Leu Phe Ser Gln Ile Ser Ser Ala Val Phe Leu 1795					1765	5				1770	)				1775	5
Leu Gin Ile Arg Ala Leu Phe Ser Gin Ile Ser Ser Ala Val Phe Leu 1795   1800   1805   1805   1806   1806   1806   1807   1	Thr	Val	Ser	Arg	Glu	Glu	Leu	Met	Met	Val	Leu	Ala	Ser	Leu	Glu	Gln
Arg Arg Val Ala Leu Glu Val Ala Ser Pro Ala Gly Gln Gly Ala Leu 1810 1815 1820  Ala Ser Asn Val Glu Leu Cys Leu Cys Pro Ala Ser Tyr Arg Gly Asp 1825 1830 1845  Ser Cys Gln Glu Cys Ala Pro Gly Phe Tyr Arg Asp Val Lys Gly Leu 1845 1855  Phe Leu Gly Arg Cys Val Pro Cys Gln Cys His Gly His Ser Asp Arg 1860 1867  Cys Leu Pro Gly Ser Gly Val Cys Val Asp Cys Gln His Asn Thr Glu 1875 1890  Asp Pro Ser Ala Pro Cys Val Ser Cys Pro Cys Fro Leu Ser Arg Asp Asp 1905  Ser Asn Asn Phe Ala Glu Gly Cys Val Asp Cys Fro Cys Pro Leu Ser Val Pro 1905  Cys Leu Cys Lys Pro Gly Tyr Ala Gly Ala Ser Cys Gln Arg Cys Ala 1925  Cys Leu Cys Lys Pro Gly Tyr Ala Gly Ala Ser Cys Glu Arg Cys Ala 1925  Cys Leu Cys Lys Pro Gly Tyr Ala Gly Ala Ser Cys Glu Arg Cys Ala 1925  Cys Leu Cys Lys Pro Gly Tyr Ala Gly Ala Ser Cys Glu Arg Cys Ala 1930  Fro Gly Phe Phe Gly Asn Pro Leu Val Leu Gly Ser Ser Cys Gln Pro 1955  Cys Asp Cys Glu Tyr Ala Cys Arg Gly Cys Leu Arg His Thr Thr Gly 1965  Cys Asp Cys Glu Tyr Ala Cys Arg Gly Cys Leu Arg His Thr Thr Gly 1965  Cys Asp Cys Glu Tyr Ala Cys Arg Gly Cys Leu Arg His Thr Thr Gly 1965  Cys Asp Cys Glu Tyr Ala Cys Arg Gly Cys Leu Arg His Thr Thr Gly 1965  Cys Asp Cys Glu Tyr Ala Cys Arg Gly Cys Leu Arg His Thr Thr Gly 1965  Cys Asp Cys Glu Tyr Ala Cys Arg Gly Cys Leu Arg His Thr Thr Gly 1965  Cys Arg Cys Glu Tyr Gly Arg Thr Glu Ala 2000  Cys Asp Pro Leu Thr Gly Ala Cys Arg Cys Thr Pro Cys Gly Thr Glu Ala 2000  Cys Asp Pro Ser Cys Thr Arg Cys Asp Cys Thr Pro Cys Gly Thr Glu Ala 2000  Cys Asp Pro His Ser Gly His Cys Leu Cys Leu Cys Lys Ala Gly Val Thr Gly				1780	)				1785	5				1790	)	
Arg Arg Val Ala Leu Glu Val Ala Ser Pro Ala Gly Gln Gly Ala Leu 1810	Leu	Gln	Ile	Arg	Ala	Leu	Phe	Ser	Gln	Ile	Ser	Ser	Ala	Val	Phe	Leu
1810			1795	5				1800	)				1805	5		
Ala Ser Asn Val Glu Leu Cys Leu Cys Pro Ala Ser Tyr Arg Gly Asp 1825	Arg	Arg	Val	Ala	Leu	Glu	Val	Ala	Ser	Pro	Ala	Gly	Gln	Gly	Ala	Leu
1835		1810	)				1815	5				1820	)			
Ser Cys Gln Glu Cys Ala Pro Gly Phe Tyr Arg Asp Val Lys Gly Leu  1845  Phe Leu Gly Arg Cys Val Pro Cys Gln Cys His Gly His Ser Asp Arg  1860  1865  1870  Cys Leu Pro Gly Ser Gly Val Cys Val Asp Cys Gln His Asn Thr Glu  1875  Gly Ala His Cys Glu Arg Cys Gln Ala Gly Phe Val Ser Ser Arg Asp  1890  Asp Pro Ser Ala Pro Cys Val Ser Cys Pro Cys Pro Leu Ser Val Pro  1905  Ser Asn Asn Phe Ala Glu Gly Cys Val Leu Arg Gly Gly Arg Thr Gln  1925  Cys Leu Cys Lys Pro Gly Tyr Ala Gly Ala Ser Cys Glu Arg Cys Ala  1940  Pro Gly Phe Phe Gly Asn Pro Leu Val Leu Gly Ser Ser Cys Gln Pro  1955  Cys Asp Cys Ser Gly Asn Gly Asp Pro Asn Leu Leu Phe Ser Asp Cys  1970  Asp Pro Leu Thr Gly Ala Cys Arg Gly Cys Leu Arg His Thr Thr Gly  1985  Pro Arg Cys Glu Ile Cys Ala Pro Gly Phe Tyr Gly Asn Ala Leu Leu  2005  Pro Gly Asp Pro His Ser Gly His Cys Leu Cys Lys Ala Gly Val Thr Glu Ala  2020  Cys Asp Pro His Ser Gly His Cys Leu Cys Lys Ala Gly Val Thr Gly  Cys Asp Pro His Ser Gly His Cys Leu Cys Lys Ala Gly Val Thr Gly	Ala	Ser	Asn	Val	Glu	Leu	Cys	Leu	Cys	Pro	Ala	Ser	Tyr	Arg	Gly	Asp
Pho   Leu   Gly   Arg   Cys   Val   Pro   Cys   Gln   Cys   His   Gly   His   Ser   Asp   Arg   Arg   1865   1870   187	1825	5				1830	)				1835	5				1840
Pho   Leu   Gly   Arg   Cys   Val   Pro   Cys   Gln   Cys   His   Gly   His   Ser   Asp   Arg   Arg   1865   1870   187	Ser	Cys	Gln	Glu	Cys	Ala	Pro	Gly	Phe	Tyr	Arg	Asp	Val	Lys	Gly	Leu
Cys       Leu       Pro       Gly       Ser       Gly       Val       Cys       Val       Asp       Cys       Gln       His       Asn       Thr       Glu         Gly       Ala       His       Cys       Glu       Arg       Cys       Gln       Ala       Gly       Phe       Val       Ser       Ser       Arg       Asp         1890       Is90       Is90 <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>_</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		-						_								
Cys       Leu       Pro       Gly       Ser       Gly       Val       Cys       Val       Asp       Cys       Gln       His       Asn       Thr       Glu         Gly       Ala       His       Cys       Glu       Arg       Cys       Gln       Ala       Gly       Phe       Val       Ser       Ser       Arg       Asp         1890       Is90       Is90 <td>Phe</td> <td>Leu</td> <td>Gly</td> <td>Arg</td> <td></td> <td></td> <td>Pro</td> <td>Cys</td> <td>Gln</td> <td>Cys</td> <td>His</td> <td>Gly</td> <td>His</td> <td>Ser</td> <td>Asp</td> <td>Arg</td>	Phe	Leu	Gly	Arg			Pro	Cys	Gln	Cys	His	Gly	His	Ser	Asp	Arg
1875			-	_	_			-				_				-
1875	Cvs	Leu	Pro	Gly	Ser	Gly	Val	Cys	Val	Asp	Cys	Gln	His	Asn	Thr	Glu
Gly Ala His Cys Glu Arg Cys Gln Ala Gly Phe Val Ser Ser Arg Asp  1890	1			_		-				-	_					
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Glv	Ala			Glu	Arq	Cys			Gly	Phe	Val	Ser	Ser	Arg	Asp
Asp Pro Ser Ala Pro Cys Val Ser Cys Pro Cys Pro Leu Ser Val Pro 1905				_		``				-					_	
1910	Asp			Ala	Pro	Cvs			Cvs	Pro	Cys	Pro	Leu	Ser	Val	Pro
Ser Asn Asn Phe Ala Glu Gly Cys Val Leu Arg Gly Gly Arg Thr Gln  1935  Cys Leu Cys Lys Pro Gly Tyr Ala Gly Ala Ser Cys Glu Arg Cys Ala  1945  Pro Gly Phe Phe Gly Asn Pro Leu Val Leu Gly Ser Ser Cys Gln Pro  1955  Cys Asp Cys Ser Gly Asn Gly Asp Pro Asn Leu Leu Phe Ser Asp Cys  1970  Asp Pro Leu Thr Gly Ala Cys Arg Gly Cys Leu Arg His Thr Gly  1985  Pro Arg Cys Glu Ile Cys Ala Pro Gly Phe Tyr Gly Asn Ala Leu Leu  2000  Pro Gly Asp Cys Ser Thr Arg Cys Asp Cys Thr Pro Cys Gly Thr Glu Ala  2025  Cys Asp Cys Leu Cys Lys Ala Gly Asp Cys Leu Cys Lys Ala Gly Asp Cys Gly Thr Gly  1985  Cys Asp Cys Thr Arg Cys Asp Cys Thr Pro Cys Gly Thr Glu Ala  2025  Cys Asp Cys Leu Cys Lys Ala Gly Val Thr Gly  1987  Cys Asp Cys Thr Gly Asp Cys Leu Cys Lys Ala Gly Val Thr Gly	_								-							
Cys Leu Cys Lys Pro Gly Tyr Ala Gly Ala Ser Cys Glu Arg Cys Ala  1945			Asn	Phe	Ala			Cvs	Val	Leu			Gly	Arg	Thr	Gln
Cys Leu Cys Lys Pro Gly Tyr Ala Gly Ala Ser Cys Glu Arg Cys Ala $1940$							_	_				-	-	_		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Cvs	Leu	Cvs	Lvs			Tvr	Ala	Glv	Ala	Ser	Cys	Glu	Arg	Cys	Ala
Pro Gly Phe Phe Gly Asn Pro Leu Val Leu Gly Ser Ser Cys Gln Pro 1955    Cys Asp Cys Ser Gly Asn Gly Asn Gly Asp Pro Asn Leu Leu Phe Ser Asp Cys 1970    Asp Pro Leu Thr Gly Ala Cys Arg Gly Cys Leu Arg His Thr Gly 2000    Pro Arg Cys Glu Ile Cys Ala Pro Gly Phe Tyr Gly Asn Ala Leu Leu 2005    Pro Gly Asp Cys Thr Arg Cys Asp Cys Thr Pro Cys Gly Thr Glu Ala 2020    Cys Asp Pro His Ser Gly His Cys Leu Cys Lys Ala Gly Val Thr Gly	_			_		_	-					_				
Cys Asp Cys Ser Gly Asn Gly Asp Pro Asn Leu Phe Ser Asp Cys Ser I967  Asp Pro Leu Thr Gly Ala Cys Arg Gly Phe Tyr Gly Asn Ala Leu Leu Phe Ser Asp Cys 2000  Pro Arg Cys Glu Ile Cys Ala Pro Gly Phe Tyr Gly Asn Ala Leu Leu Leu Leu 2015  Pro Gly Asn Cys Thr Arg Cys Asp Cys Thr Pro Cys Gly Thr Glu Ala 2025  Cys Asp Pro His Ser Gly His Cys Leu Cys Lys Ala Gly Val Thr Gly	Pro	Glv	Phe			Asn	Pro	Leu			Glv	Ser	Ser	Cys	Gln	Pro
Cys Asp Cys Ser Gly Asn Gly Asp Pro Asn Leu Leu Phe Ser Asp Cys $197^{-}$ Asp Pro Leu Thr Gly Ala Cys Arg Gly Cys Leu Arg His Thr Gly $198^{-}$ Pro Arg Cys Glu Ile Cys Ala Pro Gly Phe Tyr Gly Asn Ala Leu Leu $2005^{-}$ Pro Gly Asn Cys Thr Arg Cys Asp Cys Thr Pro Cys Gly Thr Glu Ala $2025^{-}$ Cys Asp Pro His Ser Gly His Cys Leu Cys Lys Ala Gly Val Thr Gly		- 1			-						-					
1970	Cvs	Asp			Glv	Asn	Glv			Asn	Leu	Leu	Phe	Ser	Asp	Cys
Asp Pro Leu Thr Gly Ala Cys Arg Gly Cys Leu Arg His Thr Thr Gly $1985$ Fro Arg Cys Glu Ile Cys Ala Pro Gly Phe Tyr Gly Asn Ala Leu Leu $2005$ Fro Gly Asn Cys Thr Arg Cys Asp Cys Thr Pro Cys Gly Thr Glu Ala $2025$ Cys Asp Pro His Ser Gly His Cys Leu Cys Lys Ala Gly Val Thr Gly	-1-	-	-		1		_	_							-	-
1985	Asp			Thr	Glv	Ala			Glv	Cvs	Leu	Arq	His	Thr	Thr	Gly
Pro Arg Cys Glu Ile Cys Ala Pro Gly Phe Tyr Gly Asn Ala Leu Leu $2005$					1			,	- 2	_						
Pro Gly Asn Cys Thr Arg Cys Asp Cys Thr Pro Cys Gly Thr Glu Ala $202$ Cys Asp Pro His Ser Gly His Cys Leu Cys Lys Ala Gly Val Thr Gly			Cvs	Glu	Ile			Pro	Glv	Phe			Asn	Ala	Leu	
Pro Gly Asn Cys Thr Arg Cys Asp Cys Thr Pro Cys Gly Thr Glu Ala 2020 2025 2030  Cys Asp Pro His Ser Gly His Cys Leu Cys Lys Ala Gly Val Thr Gly		9	-7-						2			2				
2020 2025 2030  Cys Asp Pro His Ser Gly His Cys Leu Cys Lys Ala Gly Val Thr Gly	Pro	Glv	Asn	Cvs			Cvs	Asp	Cvs			Cvs	Glv	Thr	Glu	Ala
Cys Asp Pro His Ser Gly His Cys Leu Cys Lys Ala Gly Val Thr Gly		1				٠	- 2					-	2			
	Cvs	Asp	Pro			Glv	His	Cvs			Lvs	Ala	Glv			Glv
	-7-					1				- 2 -						-
Arg Arg Cys Asp Arg Cys Gln Glu Gly His Phe Gly Phe Asp Gly Cys	Ara	Ara			Ara	Cvs	Gln			His	Phe	Glv			Glv	Cvs
2050 2055 2060	9	_	_		9	-10			1					1-	- 1	4
Gly Gly Cys Arg Pro Cys Ala Cys Gly Pro Ala Ala Glu Gly Ser Glu	Glv			Ara	Pro	Cvs			Glv	Pro	Ala			Glv	Ser	Glu
2065 2070 2075 2080	_	_	-,0	9				- 1 -	1					1		

Cys	His	Pro	Gln	Ser	Gly	Gln	Cys	His	Cys	Arg	Pro	Gly	Thr	Met	Gly
				2085					2090					2095	5
Pro	Gln	Cys	Arg	Glu	Cys	Ala	Pro	Gly	Tyr	Trp	Gly	Leu	Pro	Glu	Gln
			2100	)				2105	ò				2110	)	
Gly	Cys	Arg	Arg	Cys	Gln	Cys	Pro	Gly	Gly	Arg	Cys	Asp	Pro	His	Thr
		2115	5				2120	)				2125	5		
Gly	Arg	Cys	Asn	Cys	Pro	Pro	Gly	Leu	Ser	Gly	Glu	Arg	Cys	Asp	Thr
	2130	)				2135	5				2140	)			
Cys	Ser	Gln	Gln	His	Gln	Val	Pro	Val	Pro	Gly	Gly	Pro	Val	Gly	His
2145					2150					2155					2160
Ser	Ile	His	Cys	Glu	Val	Cys	Asp	His	Cys	Val	Val	Leu	Leu	Leu	Asp
				2165					2170					2175	
Asp	Leu	Glu	Arg	Ala	Gly	Ala	Leu	Leu	Pro	Ala	Ile	His	Glu	Gln	Leu
			2180					2185					219		
Arg	Gly	Ile	Asn	Ala	Ser	Ser	Met	Ala	Trp	Ala	Arg			Arg	Leu
		219					2200					2205			
Asn	Ala	Ser	Ile	Ala	Asp	Leu	Gln	Ser	Gln	Leu			Pro	Leu	Gly
	221					2215					2220				
Pro	Arg	His	Glu	Thr	Ala	Gln	Gln	Leu	Glu			Glu	Gln	Gln	
2225					2230					2235					2240
Thr	Ser	Leu	Gly	Gln	Asp	Ala	Arg	Arg			Gly	Gln	Ala		
				2245					2250					225	
Gly	Thr	Arg	Asp	Gln	Ala	Ser	Gln			Ala	Gly	Thr			Thr
			226					226					227		7
Leu	Gly	His	Ala	Lys	Thr	Leu			Ala	Ile	Arg			Asp	Arg
		227					228				_	228		n1 -	7
Thr	Leu	Ser	Glu	Leu	Met			Thr	Gly	His			Leu	Ala	Asn
	229					229			_	_	230		n1 -	G1	17.03
Ala	Ser	Ala	Pro	Ser	Gly	Glu	Gln	Leu	Leu			Leu	Ата	GIU	Val
	5			•	231					231		1	77.	D	2320
Glu	Arg	Leu	Leu			Met	Arg	Ala			ьeu	GTA	ATA		Gln
				232					233		_	-	•	233	
Ala	Ala	Ala			Glu	Leu	Ala			Gin	Arg	ьeu			Arg
			234					234		1	70	C1-	235		. 71-
Val	. Gln			Leu	Ser	Ser			Glu	GIu	Asn			reu	Ala
		235			_	_	236			C1	7. T. ~	236		ı M∽+	. Den
Thr			Arg	Asp	Arg			Gln	HIS	GIU			, тел	и мет	: Asp
	237			_	_	237			70	70.1	238		. (1.	, 7/1-	. Gla
		g Glu	ı Ala	. Leu			Ala	val	. Asp			HIG	الم ا	T WIC	a Gln 2400
238	35				239	Ð				239	2				2400

Glu	Leu	Asn	Ser	Arg	Asn	GIn	GLu	Arg	Leu	Glu	Glu	Ala	Leu	GIn	Arg
				2405	5				2410	)				2415	5
Lys	Gln	Glu	Leu	Ser	Arg	Asp	Asn	Ala	Thr	Leu	Gln	Ala	Thr	Leu	His
			2420	)				2425	)				2430	)	
Ala	Ala	Arg	Asp	Thr	Leu	Ala	Ser	Val	Phe	Arg	Leu	Leu	His	Ser	Leu
		2435	5				2440	)				2445	1		
Asp	Gln	Ala	Lys	Glu	Glu	Leu	Glu	Arg	Leu	Ala	Ala	Ser	Leu	Asp	Gly
	2450	)				2455	5				2460	)			
Ala	Arg	Thr	Pro	Leu	Leu	Gln	Arg	Met	Gln	Thr	Phe	Ser	Pro	Ala	Gly
2465	;				2470	)				2475	<u>,</u>				2480
Ser	Lvs	Leu	Arq	Leu	Val	Glu	Ala	Ala	Glu	Ala	His	Ala	Gln	Gln	Leu
	3		_	2485					2490					2495	
Glv	Gln	Leu	Ala			Leu	Ser	Ser		Ile	Leu	Asp	Val	Asn	Gln
O± y	0111	204	2500				-	2505					2510		<del></del>
Asn	Δra	Len			Ara	Ala	Tle			Ser	Asn	Ala			Ara
1135	711.9	2515		0111	1119	711.0	2520			001		2525		001	9
Tle	T.e.11			Val	Gln	Ala			Asp	Ala	Ala			Ala	Leu
110	2530		,7114	• • • • • • • • • • • • • • • • • • • •	0111	2535		014	ПОР		2540				
Gln			Asn	His	Thr			Thr	Val	Val			Glv	Leu	Val
2545		7114	7100		2550					2555		0211	<b>U</b> -1		2560
		Δla	Gln	Gln			Δla	Asn	Ser	Thr		T.e.11	Glu	Glu	
дэр	Arg	ALG	GIII	2565		пси	ALG	71311	2570		7114	Dou	014	2575	
Mot	T 011	C1 n	C1.,			7 ~~	T 011	C1		Val	Trn	Λla	Λla		
Met	Leu	GIII	2580		GIII	Arg	цеа	2585		vai	пр	ALG	2590		OIII
C1	71.	7~~			Lou	7. ~~	7 an			Ala	Lvc	Tue			Len
СТУ	Ala			GIII	ьеи	ALG	2600		Arg	AIA	nys	2605		OIII	LCu
C1	ת הות	2595		Cln	7.1.	ת ז ה			Mot	T Ou	7 l a			Thr	Aen
GIU	2610		TTE	GIII	Ата	2615		Ala	Mec	Leu	2620		ASP	1111	ASP
C1			T	T	71.			71.	T	70.70			71.	C1.,	חות
		ser	ьуѕ	гуѕ			HIS	Ala	гуз	Ala		Ald	Ала	GIU	
2625				<b></b>	2630		0.1		<b>61</b>	2635		7. 1	<b>N</b> - 1-	G1	2640
Gln	Asp	Thr	Ala		_	Val	GIn	Ser		Leu	GIn	Ala	Met		
				2645					2650		_	_		2655	
Asn	Val	Glu			Gln	Gly	Gln			Gly	Leu	Arg			Asp
			2660					2665					2670		
Leu	Gly			Val	Leu	Asp			His	Ser	Val			Leu	Glu
		2675	5				2680	)				2685	5		
Lys	Thr	Leu	Pro	Gln	Leu	Leu	Ala	Lys	Leu	Ser	Ile	Leu	Glu	Asn	Arg
	2690	)				2695	5				2700	)			
Gly	Val	His	Asn	Ala	Ser	Leu	Ala	Leu	Ser	Ala	Ser	Ile	Gly	Arg	Val
2705	5				2710	)				2715	5				2720

Arg	GIU	ьeu	тте	2725		мта	ALG	дту	2730		ser	пуз	val	2735	
D	Mo+	T	Dha		•	7×~	802	G1 ··			Len	Δra	Thr		
rro	мет	ьys	2740	Asn	σтλ	Arg	ser	G1y 2745		GTII	ьeu	ALG	2750		Ary
Asp	Leu	Ala		Leu	Ala	Ala	Tyr			Leu	Lys	Phe			Gln
		2755					2760				· 2 -	2765			
Glv	Pro			Glu	Pro	Gly			Thr	Glu	Asp	Arg	Phe	Val	Met
1	2770					2775		_			2780				
Tyr			Ser	Arg	Gln	Ala	Thr	Gly	Asp	Tyr	Met	Gly	Val	Ser	Leu
2785		_		_	2790					2795					2800
Arg	Asp	Lys	Lys	Val	His	Trp	Val	Tyr	Gln	Leu	Gly	Glu	Ala	Gly	Pro
_	-			2805					2810					2815	
Ala	Val	Leu	Ser	Ile	Asp	Glu	Asp	Ile	Gly	Glu	Gln	Phe	Ala	Ala	Val
			2820	0				282	5				283	0	
Ser	Leu	Asp	Arg	Thr	Leu	Gln	Phe	Gly	His	Met	Ser	Val	Thr	Val	Glu
		2835					2840					2845			
Arg	Gln	Met	Ile	Gln	Glu	Thr	Lys	Gly	Asp	Thr	Val	Ala	Pro	Gly	Ala
	2850					285					2860				
Glu	Gly	Leu	Leu	Asn	Leu	Arg	Pro	Asp	Asp			Phe	Tyr	Val	
2865					287					287					2880
Gly	Tyr	Pro	Ser	Thr	Phe	Thr	Pro	Pro			Leu	Arg	Phe		_
				288					289					289	
Tyr	Arg	Gly	Cys	Ile	Glu	Met	Asp			Asn	Glu	Glu			Ser
			290					290					291		_
Leu	Tyr	Asn	Phe	Glu	Arg	Thr			Leu	Asp	Thr			Asp	Arg
		291					292		_	_		292		70 -	C1
Pro	_		Arg	Ser	Lys			Gly	Asp	Pro			Thr	Asp	Gly
	293		_		<b>—</b> '	293		T 7	71	т1-	294		7. ~~	600	دری.
		Leu	Asp	Gly			Phe	Ala	arg			rne	Asp	ser	Gln 2960
294					295		63.	C1	C1	295		T 011	Wal	80~	
Ile	Ser	Thr	Thr			Phe	GLu	GIn			Arg	ьeu	val	297	Tyr
_	0.7	., .	<b>.</b>	296		T	T	C1-	297		G1 n	Pho	וים.ד		
Ser	GLy	val			rne	ьеи	гÀг	298		ser	GTII	FILE	299		Leu
- רת	τ <i>γ</i> α 1	G1 n	298		Sar	Τ.Δ11	Val			Tvr	Asp	Phe			Gly
АТа	val	299		. сту	ser	ьeu	300		. Lea	- y -	2150	300		-11-0	1
Lou	Luc			Val	Pro	T.e.			Pro	Pro	Pro			Ser	Ala
ьeu	301		ліа	val	110	301				- 2 0	302				
Ser			Tle	. Gln	Val			Leu	Glv	Glv			Lys	Arq	y Val
302					303				1	303		-	-	_	3040
	J				~ ~ ~	-				_					

Leu	Val	Arg	Val	Glu 3045		Ala	Thr	Val	Tyr 3050		Val	Glu	Gln	Asp 3055	
Asp	Leu	Glu	Leu	Ala	Asp	Ala	Tyr	Tyr	Leu	Gly	Gly	Val	Pro	Pro	Asp
			3060	)				3065	5				3070	)	
Gln	Leu	Pro	Pro	Ser	Leu	Arg	Arg	Leu	Phe	Pro	Thr	Gly	Gly	Ser	Val
		3075	5				3080	)				3085	5		
Arg	Gly	Cys	Val	Lys	Gly	Ile	Lys	Ala	Leu	Gly	Lys	Tyr	Val	Asp	Leu
	3090	)				3095	5				3100	)			
Lys	Arg	Leu	Asn	Thr	Thr	Gly	Val	Ser	Ala	Gly	Cys	Thr	Ala	Asp	Leu
3105	5				3110	)				3115	5				3120
Leu	Val	Gly	Arg	Ala	Met	Thr	Phe	His	Gly	His	Gly	Phe	Leu	Arg	Leu
				3125	5				3130	)				3135	5
Ala	Leu	Ser	Asn	Val	Ala	Pro	Leu	Thr	Gly	Asn	Val	Tyr	Ser	Gly	Phe
			3140	)				3145	5				3150	)	
Gly	Phe	His	Ser	Ala	Gln	Asp	Ser	Ala	Leu	Leu	Tyr	Tyr	Arg	Ala	Ser
_		3155					3160					3165			
Pro	Asp	Gly	Leu	Cys	Gln	Val	Ser	Leu	Gln	Gln	Gly	Arg	Val	Ser	Leu
	3170			_		3175					3180				
Gln	Leu	Leu	Arg	Thr	Glu	Val	Lys	Thr	Gln	Ala	Gly	Phe	Ala	Asp	Gly
3185					3190		_			319					3200
210															
		His	Tyr	Val			Tyr	Ser	Asn	Ala	Thr	Gly	Val	Trp	Leu
		His	Tyr	Val 3205	Ala		Tyr	Ser	Asn 3210		Thr	Gly	Val	Trp	
Ala	Pro			3205	Ala	Phe			3210	)				3215	5
Ala	Pro			3205 Gln	Ala	Phe			3210 Lys	)				3215 Pro	5
Ala Tyr	Pro Val	Asp	Asp 3220	3205 Gln	Ala Leu	Phe Gln	Gln	Met 322	3210 Lys 5	) Pro	His	Arg	Gly 3230	3215 Pro	Pro
Ala Tyr	Pro Val	Asp	Asp 3220 Gln	3205 Gln O	Ala Leu	Phe Gln	Gln	Met 3225 Gly	3210 Lys 5	) Pro	His	Arg	Gly 3230 Leu	3215 Pro	Pro
Ala Tyr Pro	Pro Val Glu	Asp Leu 323!	Asp 3220 Gln 5	3205 Gln O	Ala Leu Gln	Phe Gln Pro	Gln Glu 3240	Met 3225 Gly	3210 Lys 5 Pro	Pro Pro	His Arg	Arg Leu 324	Gly 3230 Leu	3215 Pro ) Leu	Fro Gly
Ala Tyr Pro	Pro Val Glu	Asp Leu 323! Pro	Asp 3220 Gln 5	3205 Gln ) Pro	Ala Leu Gln	Phe Gln Pro	Glu 3240 Ile	Met 3225 Gly	3210 Lys 5 Pro	Pro Pro	His Arg	Arg Leu 324! Gly	Gly 3230 Leu	3215 Pro ) Leu	Fro Gly
Ala Tyr Pro Gly	Pro Val Glu Leu 3250	Asp Leu 323! Pro	Asp 3220 Gln 5 Glu	3205 Gln ) Pro	Ala Leu Gln Gly	Phe Gln Pro Thr 3259	Glu 3240 Ile	Met 3229 Gly Tyr	3210 Lys 5 Pro Asn	Pro Pro Phe	His Arg Ser 3260	Arg Leu 324! Gly	Gly 3230 Leu Cys	3215 Pro ) Leu Ile	Pro Gly Ser
Ala Tyr Pro Gly	Pro Val Glu Leu 3250 Val	Asp Leu 323! Pro	Asp 3220 Gln 5 Glu	3205 Gln ) Pro Ser	Ala Leu Gln Gly	Phe Gln Pro Thr 3255	Glu 3240 Ile	Met 3229 Gly Tyr	3210 Lys 5 Pro Asn	Pro Pro Phe	His Arg Ser 3260 Arg	Arg Leu 324! Gly	Gly 3230 Leu Cys	3215 Pro ) Leu Ile	Pro Gly Ser
Ala Tyr Pro Gly Asn 3269	Val Glu Leu 3250 Val	Asp Leu 323! Pro )	Asp 3220 Gln 5 Glu Val	3205 Gln ) Pro Ser	Ala Leu Gln Gly Arg 3270	Phe Gln Pro Thr 3255 Leu	Glu 3240 Ile Leu	Met 3225 Gly Tyr	3210 Lys 5 Pro Asn Pro	Pro Pro Phe Gln 327	His Arg Ser 3260 Arg	Leu 324! Gly	Gly 3230 Leu Cys	3215 Pro Leu Ile Asp	Pro Gly Ser Leu 3280
Ala Tyr Pro Gly Asn 3269	Val Glu Leu 3250 Val	Asp Leu 323! Pro )	Asp 3220 Gln 5 Glu Val	3205 Gln Pro Ser	Ala Leu Gln Gly Arg 3270 Ser	Phe Gln Pro Thr 3255 Leu	Glu 3240 Ile Leu	Met 3225 Gly Tyr	3210 Lys 5 Pro Asn Pro	Pro Pro Phe Gln 327!	His Arg Ser 3260 Arg	Leu 324! Gly	Gly 3230 Leu Cys	3215 Pro Leu Ile Asp	Pro Gly Ser Leu 3280 Ala
Ala Tyr Pro Gly Asn 3269	Pro Val Glu Leu 3250 Val Gln	Asp Leu 323! Pro Phe Asn	Asp 3220 Gln 5 Glu Val Leu	3205 Gln Pro Ser Gln	Ala Leu Gln Gly Arg 3270 Ser	Phe Gln Pro Thr 3255 Leu D Val	Gln Glu 3240 Ile Leu Asn	Met 3229 Gly Tyr Gly Val	Lys Fro Asn Pro Ser 3290	Pro Pro Phe Gln 327! Thr	Arg Ser 3260 Arg 5	Arg Leu 324! Gly Val Cys	Gly 3230 Leu 5 Cys Phe	3219 Pro Leu Ile Asp Pro 3299	Pro Gly Ser Leu 3280 Ala
Ala Tyr Pro Gly Asn 3269	Pro Val Glu Leu 3250 Val Gln	Asp Leu 323! Pro Phe Asn	Asp 3220 Gln 5 Glu Val Leu	3205 Gln Pro Ser Gln Gly 3285 Thr	Ala Leu Gln Gly Arg 3270 Ser	Phe Gln Pro Thr 3255 Leu D Val	Gln Glu 3240 Ile Leu Asn	Met 3229 Gly Tyr Gly Val	Jacobson Asn Pro Ser Jacobson Asn Pro	Pro Pro Phe Gln 327! Thr	Arg Ser 3260 Arg 5	Arg Leu 324! Gly Val Cys	Gly 3230 Leu 5 Cys Phe	3215 Pro Leu Ile Asp Pro 3295 Ala	Pro Gly Ser Leu 3280 Ala
Ala Tyr Pro Gly Asn 3269 Gln Leu	Val Glu Leu 3250 Val Gln Gln	Asp Leu 323! Pro Phe Asn Ala	Asp 3220 Gln 5 Glu Val Leu Gln 3300	3205 Gln Pro Ser Gln Gly 3285 Thr	Ala Leu Gln Gly Arg 3270 Ser Pro	Phe Gln Pro Thr 3255 Leu Val	Gln Glu 3240 Ile Leu Asn	Met 3229 Gly Tyr Gly Val Gly 3309	January Ser Januar	Pro Pro Phe Gln 3279 Thr	His Arg Ser 3260 Arg Gly Gly	Arg Leu 3245 Gly Val Cys	Gly 3230 Leu 5 Cys Phe Ala Gln 3310	3215 Pro Leu Ile Asp Pro 3295 Ala	Pro Gly Ser Leu 3280 Ala Thr
Ala Tyr Pro Gly Asn 3269 Gln Leu	Val Glu Leu 3250 Val Gln Gln	Asp Leu 323! Pro Phe Asn Ala	Asp 3220 Gln 5 Glu Val Leu Gln 3300 Ala	3205 Gln Pro Ser Gln Gly 3285 Thr	Ala Leu Gln Gly Arg 3270 Ser Pro	Phe Gln Pro Thr 3255 Leu Val	Gln Glu 3240 Ile Leu Asn	Met 3229 Gly Tyr Gly Val Gly 3309 Arg	January Ser Januar	Pro Pro Phe Gln 3279 Thr	His Arg Ser 3260 Arg Gly Gly	Arg Leu 3245 Gly Val Cys	Gly 3230 Leu  Cys Phe Ala Gln 3310 His	3215 Pro Leu Ile Asp Pro 3295 Ala	Pro Gly Ser Leu 3280 Ala 5
Ala Tyr Pro Gly Asn 3269 Gln Leu Ala	Pro Val Glu Leu 3250 Val Gln Gln Arg	Asp Leu 323! Pro Phe Asn Ala Lys 331!	Asp 3220 Gln 5 Glu Val Leu Gln 3300 Ala	3205 Gln Pro Ser Gln Gly 3285 Thr	Ala Leu Gln Gly Arg 3270 Ser Pro	Phe Gln Pro Thr 3259 Leu Val Gly Arg	Gln Glu 3240 Ile Leu Asn Leu Ser 3320	Met 3229 Gly Tyr Gly Val Gly 3309 Arg	January Ser Januar	Pro Phe Gln 3279 Thr Arg	His Arg Ser 3260 Arg 5 Gly Gly Ala	Leu 324! Gly Val Cys Leu Arg 332!	Gly 3230 Leu 5 Cys Phe Ala Gln 3310 His	3215 Pro Leu Ile Asp Pro 3295 Ala Pro	Pro Gly Ser Leu 3280 Ala Thr
Ala Tyr Pro Gly Asn 3269 Gln Leu Ala	Pro Val Glu Leu 3250 Val Gln Gln Arg	Asp Leu 3235 Pro Phe Asn Ala Lys 3315 Leu	Asp 3220 Gln 5 Glu Val Leu Gln 3300 Ala	3205 Gln Pro Ser Gln Gly 3285 Thr Comparison of the comparison of	Ala Leu Gln Gly Arg 3270 Ser Pro	Phe Gln Pro Thr 3259 Leu Val Gly Arg	Gln Glu 3240 Ile Leu Asn Leu Ser 3320 Arg	Met 3229 Gly Tyr Gly Val Gly 3309 Arg	January Ser Januar	Pro Phe Gln 3279 Thr Arg	His Arg Ser 3260 Arg 5 Gly Gly Ala	Leu 324! Gly Val Cys Leu Arg 332! Ser	Gly 3230 Leu 5 Cys Phe Ala Gln 3310 His	3215 Pro Leu Ile Asp Pro 3295 Ala Pro	Pro Gly Ser Leu 3280 Ala Thr
Ala Tyr Pro Gly Asn 3269 Gln Leu Ala Cys	Pro Val Glu Leu 3250 Val Gln Gln Arg Met 3330	Asp Leu 323! Pro Phe Asn Ala Lys 331! Leu	Asp 3220 Gln 5 Glu Val Leu Gln 3300 Ala 5	3205 Gln Pro Ser Gln Gly 3285 Thr Comparison of the comparison of	Ala Leu Gln Gly Arg 3270 Ser Pro Arg	Phe Gln Pro Thr 3255 Leu Val Gly Arg Leu 3335	Gln Glu 3240 Ile Leu Asn Leu Ser 3320 Arg	Met 3229 Gly Tyr Gly Val Gly 3309 Arg	January Asn Pro Ser January Asn Pro Gln Thr	Pro Phe Gln 327! Thr Arg Pro	His Arg Ser 3260 Arg 6 Gly Gly Ala Asp 3340	Arg Leu 3249 Gly Val Cys Leu Arg 3329 Ser	Gly 3230 Leu 5 Cys Phe Ala Gln 3310 His 5	January 3215 Pro Leu Ile Asp Pro 3295 Ala Pro Gln	Pro Gly Ser Leu 3280 Ala Thr Ala

His	Arg	Asn	Trp	Pro		Leu	Ser	Met			Leu	Pro	Arg		
				3365					3370					3375	
Arg	Gly	Leu	Leu	Leu	Phe	Thr	Ala	Arg	Leu	Arg	Pro	Gly	Ser	Pro	Ser
			3380	)				3385	ò				3390	)	
Leu	Ala	Leu	Phe	Leu	Ser	Asn	Gly	His	Phe	Val	Ala	Gln	Met	Glu	Gly
		3395	<u>;</u>				3400	)				3405	5		
Leu	Gly	Thr	Arg	Leu	Arg	Ala	Gln	Ser	Arg	Gln	Arg	Ser	Arg	Pro	Gly
	3410	)				3415	5				3420	)			
Arg	Trp	His	Lys	Val	Ser	Val	Arg	Trp	Glu	Lys	Asn	Arg	Ile	Leu	Leu
3425	5				3430	)				3435	5			•	3440
Val	Thr	Asp	Gly	Ala	Arg	Ala	Trp	Ser	Gln	Glu	Gly	Pro	His	Arg	Gln
				3445	5				3450	)				3455	5
His	Gln	Gly	Ala	Glu	His	Pro	Gln	Pro	His	Thr	Leu	Phe	Val	Gly	Gly
			3460	)				3465	5				3470	)	
Leu	Pro	Ala	Ser	Ser	His	Ser	Ser	Lys	Leu	Pro	Val	Thr	Val	Gly	Phe
		3475	5				3480	)				3485	5		
Ser	Gly	Cys	Val	Lys	Arg	Leu	Arg	Leu	His	Gly	Arg	Pro	Leu	Gly	Ala
	3490	)				349	5				3500	) `			
Pro	Thr	Arg	Met	Ala	Gly	Val	Thr	Pro	Cys	Ile	Leu	Gly	Pro	Leu	Glu
3505	5				3510	0				351	5				3520
Ala	Gly	Leu	Phe	Phe	Pro	Gly	Ser	Gly	Gly	Val	Ile	Thr	Leu	Asp	Leu
				3525	5				3530	0			•	3535	5
Pro	Gly	Ala	Thr	Leu	Pro	Asp	Val	Gly	Leu	Glu	Leu	Glu	Val	Arg	Pro
			354	0				354	5				355	0	
Leu	Ala	Val	Thr	Gly	Leu	Ile	Phe	His	Leu	Gly	Gln	Ala	Arg	Thr	Pro
		355	5				356	0				356	5		
Pro	Tyr	Leu	Gln	Leu	Gln	Val	Thr	Glu	Lys	Gln	Val	Leu	Leu	Arg	Ala
	357	0				357	5				358	О			
Asp	Asp	Gly	Ala	Gly	Glu	Phe	Ser	Thr	Ser	Val	Thr	Arg	Pro	Ser	Val
358	5				359	0				359	5				3600
Leu	Cys	Asp	Gly	Gln	Trp	His	Arg	Leu	Ala	Val	Met	Lys	Ser	Gly	Asn
		_		360					361					361	
Val	Leu	Arg	Leu	Glu	Val	Asp	Ala	Gln	Ser	Asn	His	Thr	Val	Gly	Pro
			362	0				362	5				363	0	·
Leu	Leu	Ala	Ala	Ala	Ala	Gly	Ala	Pro	Ala	Pro	Leu	Tyr	Leu	Gly	Gly
		363					364					364			
Leu	Pro	Glu	Pro	Met	Ala	Val	Gln	Pro	Trp	Pro	Pro	Ala	Tyr	Cys	Gly
	365					365					366				
Cys			Arg	Leu	Ala	Val	Asn	Arg	Ser	Pro	Val	Ala	Met	Thr	Arg
366		Ĩ	_		367					367					3680

## Ser Val Glu Val His Gly Ala Val Gly Ala Ser Gly Cys Pro Ala Ala 3685 3690 . 3695

<210> 32 <211> 337 <212> PRT <213> Homo sapiens <400> 32 Met Thr Asn Asn Ser Gly Ser Lys Ala Glu Leu Val Val Gly Gly Lys 10 Tyr Lys Leu Val Arg Lys Ile Gly Ser Gly Ser Phe Gly Asp Val Tyr 25 20 Leu Gly Ile Thr Thr Asn Gly Glu Asp Val Ala Val Lys Leu Glu 40 Ser Gln Lys Val Lys His Pro Gln Leu Leu Tyr Glu Ser Lys Leu Tyr Thr Ile Leu Gln Gly Gly Val Gly Ile Pro His Met His Trp Tyr Gly Gln Glu Lys Asp Asn Asn Val Leu Val Met Asp Leu Leu Gly Pro Ser 85 90 Leu Glu Asp Leu Phe Asn Phe Cys Ser Arg Arg Phe Thr Met Lys Thr 100 105 Val Leu Met Leu Ala Asp Gln Met Ile Ser Arg Ile Glu Tyr Val His 115 125 120 Thr Lys Asn Phe Leu His Arg Asp Ile Lys Pro Asp Asn Phe Leu Met 135 140 130 Gly Thr Gly Arg His Cys Asn Lys Leu Phe Leu Ile Asp Phe Gly Leu 155 150 Ala Lys Lys Tyr Arg Asp Asn Arg Thr Arg Gln His Ile Pro Tyr Arg 165 170 Glu Asp Lys His Leu Ile Gly Thr Val Arg Tyr Ala Ser Ile Asn Ala 185 His Leu Gly Ile Glu Gln Ser Arg Arg Asp Asp Met Glu Ser Leu Gly 195 200 Tyr Val Phe Met Tyr Phe Asn Arg Thr Ser Leu Pro Trp Gln Gly Leu 210 215 220 Arg Ala Met Thr Lys Lys Gln Lys Tyr Glu Lys Ile Ser Glu Lys Lys 235 240 230 225

```
Met Ser Thr Pro Val Glu Val Leu Cys Lys Gly Phe Pro Ala Glu Phe
                                    250
                245
Ala Met Tyr Leu Asn Tyr Cys Arg Gly Leu Arg Phe Glu Glu Val Pro
            260
                                265
Asp Tyr Met Tyr Leu Arg Gln Leu Phe Arg Ile Leu Phe Arg Thr Leu
                            280
Asn His Gln Tyr Asp Tyr Thr Phe Asp Trp Thr Met Leu Lys Gln Lys
    290
                        295
Ala Ala Gln Gln Ala Ala Ser Ser Gly Gln Gly Gln Gln Ala Gln
                                        315
                    310
Thr Gln Thr Gly Lys Gln Thr Glu Lys Asn Lys Asn Asn Val Lys Asp
                                    330
                                                         335
                325
Asn
<210> 33
<211> 888
<212> PRT
<213> Homo sapiens
<400> 33
```

# Met Glu Ser Leu Leu Pro Val Leu Leu Leu Ala Ile Leu Trp 10 Thr Gln Ala Ala Leu Ile Asn Leu Lys Tyr Ser Val Glu Glu Glu 25 Gln Arg Ala Gly Thr Val Ile Ala Asn Val Ala Lys Asp Ala Arg Glu Ala Gly Phe Ala Leu Asp Pro Arg Gln Ala Ser Ala Phe Arg Val Val Ser Asn Ser Ala Pro His Leu Val Asp Ile Asn Pro Ser Ser Gly Leu 70 65 Leu Val Thr Lys Gln Lys Ile Asp Arg Asp Leu Leu Cys Arg Gln Ser 85 90 Pro Lys Cys Ile Ile Ser Leu Glu Val Met Ser Ser Met Glu Ile 100 105 Cys Val Ile Lys Val Glu Ile Lys Asp Leu Asn Asp Asn Ala Pro Ser 120 125 115 Phe Pro Ala Ala Gln Ile Glu Leu Glu Ile Ser Glu Ala Ala Ser Pro, 130 135 140

Phe Gly Val Gln Thr Tyr Glu Leu Thr Pro Asn Glu Leu Phe Gly Leu 165	_	Thr	Arg	Ile	Pro		Asp	Ser	Ala	Tyr		Pro	Asp	Ser	Gly	Ser 160
Ser	145	- 1		<b>0.1</b>	m1	150	G1	т	mb	Dwo	155	C1.,	T 011	Pho	Glv	
Ser   Ser   Leu   Ser   Arg   Glu   Asp   Glu   Ser   Arg   Phe   Ala   Glu   Leu   Val   Val   Ser   Leu   Asp   Arg   Glu   Thr   Gln   Ser   His   Tyr   Ser   Phe   Arg   Ile   195   200   205	Phe	GLY	Val			Tyr	GIU	Leu	Int		ASII	GIU	пеп	FIIE		Бец
Ser   Leu   Asp   Arg   Glu   Thr   Gln   Ser   His   Tyr   Ser   Phe   Arg   Ile   195   200   205		1	_			01	7	C1	Com		Dho	71.	Clu	Tau		Va l
Ser   Leu   Asp   Arg   Glu   Thr   Gln   Ser   His   Tyr   Ser   Phe   Arg   Ile   195   200   205   205   205   205   205   207	GIu	lle	Lys		Arg	GIÀ	Asp	GTĀ		Arg	rne	на	Giu		Vai	Vai
The   Ala   Leu   Asp   Gly   Gly   Asp   Pro   Pro   Arg   Leu   Gly   Thr   Val   Gly   Leu   210	~ 1	_			7	7)	C1	Πb ~		Cor	uic	Тиг	Sar		Δra	Tle
The Ala Leu Asp Gly Gly Asp Pro Pro Arg Leu Gly Thr Val Gly Leu 210	Glu	гÀг		Leu	Asp	Arg	GIU		GIII	Ser	111.5	ı y ±		1110	1119	
Ser   Ite   Lys   Val   Thr   Asp   Ser   Asp   Asp	m\	77.		7 an	C1,,	Clu	7 en		Pro	Ara	Leu	G1 v		Val	Glv	Leu
Ser   Ile   Lys   Val   Thr   Asp   Ser   Asp   Asp   Asp   Asp   Asp   Pro   Val   Phe   Ser   Glu   225   230   230   235   240   240   255   240   255   255   240   255   250   255	1111		пеп	Asp	СТУ	Gry		110	110	**** 9	200				1	
225	Sor		Tue	Val	Thr	Asn		Asn	Asp	Asn	Asn		Val	Phe	Ser	Glu
Ser         Thr         Tyr         Ala         Val         Ser         Val         Pro         Glu         Ass         Ser         Pro         Ass         Pro         Ass         Glu         Gly         Thr         Pro         Ass         Glu         Gly         Thr         Ass         Gly         Glu         Glu         Gly         Glu         Cor         Cor <td></td> <td>116</td> <td>цуз</td> <td>Val</td> <td>1111</td> <td></td> <td>DCI</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		116	цуз	Val	1111		DCI									
Val         11e         Arg         Leu         Asn         Ala         Ser         Asp         Pro         Asp         Glu         Gly         Thr         Asn         Gly         Gln         Gly         Gly         Gly         Gly         Gly         Gly         Gly         Fro         Asp         Glu         Gly         Fro         Asp         Asp         Arg         Arg         Arg         Glu         Leu         Asp         Arg         Glu         Leu         Asp         Asp         Arg         Glu         Leu         Asp         Arg         Asp         Asp <td></td> <td>Thr</td> <td>Tur</td> <td>Δla</td> <td>Val</td> <td></td> <td>Val</td> <td>Pro</td> <td>Glu</td> <td>Asn</td> <td>Ser</td> <td>Pro</td> <td>Pro</td> <td>Asn</td> <td>Thr</td> <td>Pro</td>		Thr	Tur	Δla	Val		Val	Pro	Glu	Asn	Ser	Pro	Pro	Asn	Thr	Pro
Val         11e         Arg         Leu         Ash         Ala         Ser         Asp         Glu         Gly         Thr         Ash         Gly         Gly         265          270          270          Val         Val         Tyr         Ser         Phe         Tyr         Gly         Tyr         Val         Ash         Asp         Arg         Thr         Arg         Glu         Leu         Ash         Asp         Arg         Thr         Arg         Glu         Leu         Ash         Asp         Val         Ash         Asp         Ash         Ash <td>261</td> <td>1114</td> <td>- y -</td> <td></td> <td></td> <td>- <b></b></td> <td></td>	261	1114	- y -			- <b></b>										
Val         Tyr         Ser         Phe         Tyr         Gly         Tyr         Val         Asp         Arg         Thr         Arg         Glu         Leu           Phe         Gln         Ile         Asp         Pro         His         Ser         Gly         Leu         Val         Thr         Val         Thr         Arg         Hu         Leu         Asp         Thr         Ala         Leu         Asp         Thr         Val         Ala         Leu         Asp         Thr         Ala         Leu         Asp         Thr         Ala         Leu         Asp         Val         Thr         Ala         Asp         Ala         Asp	Val	Ile	Ara	Leu		Ala	Ser	Asp	Pro	Asp	Glu	Gly	Thr	Asn	Gly	Gln
Phe   Gln   Tle   Asp   Pro   His   Ser   Gly   Leu   Val   Thr   Val   Thr   Gly   Ala   Leu   Z90	• • • •		5					-								
Phe   Gln   Tle   Asp   Pro   His   Ser   Gly   Leu   Val   Thr   Val   Thr   Gly   Ala   Leu   Z90	Val	Val	Tyr	Ser	Phe	Tyr	Gly	Tyr	Val	Asn	Asp	Arg	Thr	Arg	Glu	Leu
Asp       Tyr       Glu       Glu       Gly       His       Val       Tyr       Glu       Leu       Asp       Val       Gln       Ala       Lys       Asp         305       Val       Fro       Asn       Ser       11e       Pro       Ala       His       Cys       Lys       Val       Thr       Val       Ser       Val         Leu       Gly       Pro       Asn       Ser       Ile       Pro       Ala       His       Cys       Lys       Val       Thr       Val       Ser       Val         Leu       Asp       Thr       Asn       Asp       Asn       Pro       Pro       Val       Ile       Asn       Leu       Val       Asn         Ser       Glu       Leu       Val       Glu       Val       Ser       Glu       Ser       Ala       Pro       P																
Asp       Tyr       Glu       Glu       Gly       His       Val       Tyr       Glu       Leu       Asp       Val       Gln       Ala       Lys       Asp         305       Val       Fro       Asn       Ser       11e       Pro       Ala       His       Cys       Lys       Val       Thr       Val       Ser       Val         Leu       Gly       Pro       Asn       Ser       Ile       Pro       Ala       His       Cys       Lys       Val       Thr       Val       Ser       Val         Leu       Asp       Thr       Asn       Asp       Asn       Pro       Pro       Val       Ile       Asn       Leu       Val       Asn         Ser       Glu       Leu       Val       Glu       Val       Ser       Glu       Ser       Ala       Pro       P	Phe	Gln	Ile	Asp	Pro	His	Ser	Gly	Leu	Val	Thr	Val	Thr	Gly	Ala	Leu
Secondary   Seco																
Leu Gly Pro Asn Ser Ile Pro Ala His Cys Lys Val Thr Val Ser Val Asn 325	Asp	Tyr	Glu	Glu	Gly	His	Val	Tyr	Glu	Leu	Asp	Val	Gln	Ala	Lys	Asp
Leu Asp       Thr Asn Asp       Asp Asp Asp Asp Asp Asp Pro Pro Val Ile       Asp																
Leu Asp Thr Asn Asp Asn Pro Pro Val Ile Asn Leu Leu Ser Val Asn Ser Glu Leu Val Glu Val Ser Glu Ser Ala Pro Pro Gly Tyr Val Ile 355	Leu	Gly	Pro	Asn	Ser	Ile	Pro	Ala	His	Cys	Lys	Val	Thr	Val		
Ser       Glu       Leu       Val       Glu       Val       Ser       Glu       Ser       Ala       Pro       Pro       Gly       Tyr       Val       Ile         Ala       Leu       Val       Arg       Val       Ser       Asp       Arg       Asp       Ser       Ala       Pro       Pro       Gly       Tyr       Val       Ile         Ala       Leu       Val       Arg       Arg       Arg       Leu       Arg       Val         370														_		
Ser       Glu       Leu       Val       Glu       Val       Ser       Glu       Ser       Ala       Pro       Pro       Gly       Tyr       Val       Ile         Ala       Leu       Val       Arg       Asp       Arg       Asp       Ser       Gly       Leu       Asp       Gly       Arg       Leu       Arg       Val         370       370       375       375       380       3	Leu	Asp	Thr	Asn	Asp	Asn	Pro	Pro			Asn	Leu	Leu			Asn
Ala Leu Val Arg Val Ser Asp Arg Asp Ser Gly Leu Asn Gly Arg Val 370											_	_	0.1			Tla
Ala Leu Val Arg Val Ser Asp Arg Asp Ser Gly Leu Asn Gly Arg Val 370	Ser	Glu			Glu	Val	Ser			Ala	Pro	Pro			val	TTE
370						_	_			C -					Ara	l Val
Gln Cys Arg Leu Leu Gly Asn Val Pro Phe Arg Leu Gln Glu Tyr Glu 385	Ala			Arg	Val	Ser			, Asp	ser	GΤĀ			, сту	AT 9	, va.
385	<u> </u>			т	т	. (1			Dro	, Phe	Ara			Glu	Tvr	Glu
Ser Phe Ser Thr Ile Leu Val Asp Gly Arg Leu Asp Arg Glu Gln His 405 410 415  Asp Gln Tyr Asn Leu Thr Ile Gln Ala Arg Asp Gly Gly Val Pro Met 420 425 430  Leu Gln Ser Ala Lys Ser Phe Thr Val Leu Ile Thr Asp Glu Asn Asp 435 440 445  Asn His Pro His Phe Ser Lys Pro Tyr Tyr Gln Val Ile Val Gln Glu			Arg	Leu	ьеи			. val	. PIC	, rne			. 011.	. 510	y-	
Asp Gln Tyr Asn Leu Thr Ile Gln Ala Arg Asp Gly Gly Val Pro Met 420			C =	. mb	. т1-			Der	s Gla	, Arc			Arc	Glu	Glr	
Asp Gln Tyr Asn Leu Thr Ile Gln Ala Arg Asp Gly Gly Val Pro Met 420 425 430  Leu Gln Ser Ala Lys Ser Phe Thr Val Leu Ile Thr Asp Glu Asn Asp 435 440 445  Asn His Pro His Phe Ser Lys Pro Tyr Tyr Gln Val Ile Val Gln Glu	Ser	. Phe	ser	inr			ı val	. voř	, GT					, 510		
Leu Gln Ser Ala Lys Ser Phe Thr Val Leu Ile Thr Asp Glu Asn Asp 435  Asn His Pro His Phe Ser Lys Pro Tyr Tyr Gln Val Ile Val Gln Glu	71	· ~1~	, η,,,,	7.00			· Tle	Glr	n Ala			Glv	, Glv	val		
Leu Gln Ser Ala Lys Ser Phe Thr Val Leu Ile Thr Asp Glu Asn Asp 435  Asn His Pro His Phe Ser Lys Pro Tyr Tyr Gln Val Ile Val Gln Glu	Asp	, GIN	туг			ـــــــــــــــــــــــــــــــــــــ					, <u>-</u> -E	1	1			
435 440 445 Asn His Pro His Phe Ser Lys Pro Tyr Tyr Gln Val Ile Val Gln Glu	Lov	. G1~	, Sp:			s Ser	· Phe	Thi			ı Ile	e Thi	. Asr			n Asp
Asn His Pro His Phe Ser Lys Pro Tyr Tyr Gln Val Ile Val Gln Glu	nec	. 311			y.	. 501										
	Asr	n His			s Phe	e Sei	. Lys			с Туз	c Glr	ı Val	l Ile	e Val	Glr	n Glu
450 455 460	1101								_	_		460				

Asn 465	Asn	Thr	Pro	Gly	Ala 470	Tyr	Leu	Leu	Ser	Val 475	Ser	Ala	Arg	Asp	Pro 480
	Leu	Gly	Leu	Asn		Ser	Val	Ser	Tyr	Gln	Ile	Val	Pro	Ser	
				485		•			490					495	
Val	Arg	Asp		Pro	Val	Phe	Thr	_	Val	Ser	Ile	Asn		Asn	Ser
			500			_	_	505	_				510	_	
Gly	Asp		Tyr	Ala	Leu	Arg		Phe	Asn	His	Glu		Thr	Lys	Ala
_,		515	_		_		520	_	<b>6</b> 1	- 1	_	525	_		<b>61</b>
Pne		Pne	гуs	vaı	Leu		гуs	Asp	GTÀ	Gly		Pro	ser	Leu	GIN
Co.~	530	7.1.5	Th >	Wal	7 ~ ~	535	Tlo	Tlo	Tou	Λan	540 Val	Λαη	Λcn	Λen	Thr
545	ASII	Ата	TIIL	vaı	550	vaı	116	116	Leu	Asp 555	val	ASII	ASP	ASII	560
	Val	Tle	Thr	Ala		Pro	Leu	Ile	Asn	Gly	Thr	Ala	Glu	Val	
210				565					570	1				575	- 1 <b>-</b>
Ile	Pro	Ara	Asn		Gly	Ile	Gly	Tyr		Val	Thr	Val	Val		Ala
		J	580		_		_	585					590	-	
Glu	Asp	Tyr		Glu	Gly	Glu	Asn	Gly	Arg	Val	Thr	Tyr	Asp	Met	Thr
		595					600					605			
Glu	Gly	Asp	Arg	Gly	Phe	Phe	Glu	Ile	Asp	Gln	Val	Asn	Gly	Glu	Val
	610					615					620				
Arg	Thr	Thr	Arg	Thr	Phe	Gly	Glu	Ser	Ser	Lys	Ser	Ser	Tyr	Glu	Leu
625			•		630					635					640
Ile	Val	Val	Ala	His	Asp	His	Gly	Lys		Ser	Leu	Ser	Ala		Ala
				645					650					655	
Leu	Val	Leu		Tyr	Leu	Ser	Pro		Leu	Asp	Ala	Gln		Ser	Met
63	O.	17. 3	660	<b>T</b>	0.5	T	тэ.	665	тэ -	тэ.	70.7 -	T	670	C ~ ~	т) -
GTA	ser		Asn	ьeu	ser	ьeu	680	rne	тте	Ile	ΑΙα	Leu 685	стЛ	ser	тте
Δ1 <del>-</del> -	C1 1/	675	Leu	Dhe	Val	Thr		Tla	Pho	Val	Δl >		T.176	Cve	Luc
AId	690	116	πeα		vaı	695	FIC C	116	riie	val	700	116	БУЗ	Cys	гуз
Ara		Asn	Lvs	Glu	Ile		Thr	Tvr	Asn	Cys		Asn	Cvs	Leu	Thr
705			_, ~		710	9		- , -		715			- 4 -		720
	Thr	Cys	Leu	Leu		Cys	Phe	Ile	Lys	Gly	Gln	Asn	Ser	Lys	
		_		725	_	-			730	_				735	_
Leu	His	Cys	Ile	Ser	Val	Ser	Pro	Ile	Ser	Glu	Glu	Gln	Asp	Lys	Lys
			740					745					750		
Thr	Glu	Glu	Lys	Val	Ser	Leu	Arg	Gly	Lys	Arg	Ile	Ala	Glu	Tyr	Ser
		755					760					765			
Tyr	Gly	His	Gln	Lys	Lys	Ser	Ser	Lys	Lys	Lys	Lys	Ile	Ser	Lys	Asn
	770					775					780				

Asp Ile Arg Leu Val Pro Arg Asp Val Glu Glu Thr Asp Lys Met Asn Val Val Ser Cys Ser Ser Leu Thr Ser Ser Leu Asn Tyr Phe Asp Tyr His Gln Gln Thr Leu Pro Leu Gly Cys Arg Arg Ser Glu Ser Thr Phe Leu Asn Val Glu Asn Gln Asn Thr Arg Asn Thr Ser Ala Asn His Ile Tyr His His Ser Phe Asn Ser Gln Gly Pro Gln Gln Pro Asp Leu Ile Ile Asn Gly Val Pro Leu Pro Glu Val Ser Ala Ala Lys Trp Leu Cys Glu Val Leu Pro Gly Leu Leu Leu 

<210> 34

<211> 855

<212> PRT

<213> Homo sapiens

### <400> 34

Met Glu Ser Leu Leu Leu Pro Val Leu Leu Leu Ala Ile Leu Trp Thr Gln Ala Ala Leu Ile Asn Leu Lys Tyr Ser Val Glu Glu Gln Arg Ala Gly Thr Val Ile Ala Asn Val Ala Lys Asp Ala Arg Glu Ala Gly Phe Ala Leu Asp Pro Arg Gln Ala Ser Ala Phe Arg Val Val Ser Asn Ser Ala Pro His Leu Val Asp Ile Asn Pro Ser Ser Gly Leu Leu Val Thr Lys Gln Lys Ile Asp Arg Asp Leu Leu Cys Arg Gln Ser Pro Lys Cys Ile Ile Ser Leu Glu Val Met Ser Ser Ser Met Glu Ile Cys Val Ile Lys Val Glu Ile Lys Asp Leu Asn Asp Asn Ala Pro Ser Phe Pro Ala Ala Gln Ile Glu Leu Glu Ile Ser Glu Ala Ala Ser Pro 

Gly 145	Thr	Arg	Ile	Pro	Leu 150	Asp	Ser	Ala	Tyr	Asp 155	Pro	Asp	Ser	Gly	Ser 160
Phe	Gly	Val	Gln	Thr 165	Tyr	Glu	Leu	Thr	Pro 170	Asn	Glu	Leu	Phe	Gly 175	Leu
Glu	Ile	Lys	Thr 180	Arg	Gly	Asp	Gly	Ser 185	Arg	Phe	Ala	Glu	Leu 190	Val	Val
Glu	Lys	Ser 195	Leu	Asp	Arg	Glu	Thr 200	Gln	Ser	His	Tyr	Ser 205	Phe	Arg	Ile
	210					215					220			Gly	
225					230					235				Ser	240
Ser	Thr	Tyr	Ala	Val 245	Ser	Val	Pro	Glu	Asn 250	Ser	Pro	Pro	Asn	Thr 255	Pro
		_	260				_	265					270	•	
Val	Val	Tyr 275	Ser	Phe	Tyr	Gly	Tyr 280	Val	Asn	Asp	Arg	Thr 285	Arg	Glu	Leu
Phe	Gln 290	Ile	Asp	Pro	His	Ser 295	Gly	Leu	Val	Thr	Val 300	Thr	Gly	Ala	Leu
Asp 305	Tyr	Glu	Glu	Gly	His 310	Val	Tyr	Glu	Leu	Asp 315	Val	Gln	Ala	Lys	Asp 320
Leu	Gly	Pro	Asn	Ser 325	Ile	Pro	Ala	His	Cys 330	Lys	Val	Thr	Val	Ser 335	Val
Leu	Asp	Thr	Asn 340	Asp	Asn	Pro	Pro	Val 345	Ile	Asn	Leu	Leu	Ser 350	Val	Asn
		355					360					365		Val	
	370					375					380			Arg	
385					390					395					Glu 400
Ser	Phe	Ser	Thr	Ile 405	Leu	Val	Asp	Gly	Arg 410	Leu	Asp	Arg	Glu	Gln 415	His
		-	420					425					430	Pro	
		435					440					445		Asn	
Asn	His 450	Pro	His	Phe	Ser	Lys 455	Pro	Tyr	Tyr	Gln	Val 460	Ile	Val	Gln	Glu

,

`

Asn	Asn	Thr	Pro	Gly	Ala	Tyr	Leu	Leu	Ser	Val	Ser	Ala	Arg	Asp	Pro
465					470					475			,		480
Asp	Leu	Gly	Leu	Asn	Gly	Ser	Val	Ser	Tyr	Gln	Ile	Val	Pro	Ser	Gln
				485					490.					495	
Val	Arg	Asp	Met	Pro	Val	Phe	Thr	Tyr	Val	Ser	Ile	Asn	Pro	Asn	Ser
	-	_	500					505					510		
Glv	Asp	Ile	Tyr	Ala	Leu	Arg	Ser	Phe	Asn	His	Glu	Gln	Thr	Lys	Ala
_	-	515	-			_	520					525			
Phe	Glu		Lvs	Val	Leu	Ala	Lys	Asp	Gly	Gly	Leu	Pro	Ser	Leu	Gln
,	530					535	-	-	-	_	540				
Ser		Δla	Thr	Va1	Ara		Ile	Ile	Leu	Asp	Val	Asn	Asp	Asn	Thr
545					550			·		555			-		560
	Val	Tle	Thr	Ala		Pro	Leu	Ile	Asn		Thr	Ala	Glu	Val	Tyr
110	v u ı	110		565					570	1				575	-
Tla	Pro	Ara	Asn		Glv	Ile	Glv	Tvr	Leu	Val	Thr	Val	Val		Ala
116	110	+11 Y	580	201	<u>y</u>		1	585					590	-	
Glu	Asn	Tur		Glu	Gl v	Glu	Asn		Arg	Val	Thr	Tvr	Asp	Met	Thr
JIU	1135	595			, — y		600	1	9			605	-		
Glu	Gl tr		Ara	G1 v	Phe	Phe		Ile	Asp	Gln	Val		Gly	Glu	Val
GIU	610	лэр	1119	O + y	1.10	615	J_4				620				
A~~		Thr	Ara	Thr	Phe		Glu	Ser	Ser	Lvs		Ser	Tyr	Glu	Leu
625	T #1T	111L	1119	* * * * * *	630	1				635			-		640
	Val	Val	ДІа	His		His	G] v	Lvs	Thr		Leu	Ser	Ala	Ser	Ala
116	v a 1	Val	2.11.CI	645	-1.5P		1	-10	650					655	
יום.Т	Val	T,en	Tle		Leu	Ser	Pro	Ala	Leu	Asp	Ala	Gln	Glu		Met
ьeu	Val	пси	660	- 1 -				665		- 1-			670		
Cl w	Ser	Val		Leu	Ser	Leu	Ile		Ile	Ile	Ala	Leu	Gly	Ser	Ile
G T Å	JUL	675			JUL		680					685			
Δl=	Glv			Phe	Val	Thr		Ile	Phe	Val	Ala			Cys	Lys
2110	690		_04			695					700		-	_	_
Ara			Lvs	Glu	Ile		Thr	Tvr	Asn	Cys			Ala	Glu	Tyr
705		11011			710					715	,				720
		Glv	His	Gln			Ser	Ser	Lys		Lys	Lys	Ile	Ser	Lys
201	- 1 -	1		725		, ,			730		-	_		735	
Asn	Asn	Tle	Ara			Pro	Ara	Asp	Val		Glu	Thr	Asp		
11011	1131		740				5	745					750		
Aen	Val	Val			Ser	Ser	Len			Ser	Leu	. Asn	Tyr	Phe	Asp
11511	val	755		د ړ د			760					765			-
ፐህን	Hie			Thr	Leu	Pro			, Cvs	Ara	Ara			Ser	Thr
- y -	770					775		- <b>1</b>	<b>_</b>	_	780				
	, , 0	•													

Phe Leu Asn Val Glu Asn Gln Asn Thr Arg Asn Thr Ser Ala Asn His Ile Tyr His His Ser Phe Asn Ser Gln Gly Pro Gln Gln Pro Asp Leu Ile Ile Asn Gly Val Pro Leu Pro Glu Thr Glu Asn Tyr Ser Phe Asp Ser Asn Tyr Val Asn Ser Arg Ala His Leu Ile Lys Arg Tyr Val Gly Leu Leu Ala Tyr Cys Cys Asn 

<210> 35

<211> 329

<212> PRT

<213> Homo sapiens

<400> 35

Met Val Thr Lys Ala Phe Val Leu Leu Ala Ile Phe Ala Glu Ala Ser Ala Lys Ser Cys Ala Pro Asn Lys Ala Asp Val Ile Leu Val Phe Cys Tyr Pro Lys Thr Ile Ile Thr Lys Ile Pro Glu Cys Pro Tyr Gly Trp Glu Val His Gln Leu Ala Leu Gly Gly Leu Cys Tyr Asn Gly Val His Glu Gly Gly Tyr Tyr Gln Phe Val Ile Pro Asp Leu Ser Pro Lys Asn Lys Ser Tyr Cys Gly Thr Gln Ser Glu Tyr Lys Pro Pro Ile Tyr His Phe Tyr Ser His Ile Val Ser Asn Asp Thr Thr Val Ile Val Lys Asn Gln Pro Val Asn Tyr Ser Phe Ser Cys Thr Tyr His Ser Thr Tyr Leu Val Asn Gln Ala Ala Phe Asp Gln Arg Val Ala Thr Val His Val Lys Asn Gly Ser Met Gly Thr Phe Glu Ser Gln Leu Ser Leu Asn Phe Tyr Thr Asn Ala Lys Phe Ser Ile Lys Lys Glu Ala Pro Phe Val Leu Glu 

Ala Ser Glu Ile Gly Ser Asp Leu Phe Ala Gly Val Glu Ala Lys Gly 180 185 Leu Ser Ile Arg Phe Lys Val Val Leu Asn Ser Cys Trp Ala Thr Pro 200 205 Ser Ala Asp Phe Met Tyr Pro Leu Gln Trp Gln Leu Ile Asn Lys Gly 215 220 Cys Pro Thr Asp Glu Thr Val Leu Val His Glu Asn Gly Arg Asp His 240 225 230 235 Arg Ala Thr Phe Gln Phe Asn Ala Phe Arg Phe Gln Asn Ile Pro Lys 245 250 Leu Ser Lys Val Trp Leu His Cys Glu Thr Phe Ile Cys Asp Ser Glu 265 260 Lys Leu Ser Cys Pro Val Thr Cys Asp Lys Arg Lys Arg Leu Leu Arg 280 285 Asp Gln Thr Gly Gly Val Leu Val Val Glu Leu Ser Leu Arg Ser Arg 295 300 Gly Phe Ser Ser Leu Tyr Ser Phe Ser Asp Val Leu His His Leu Ile 310 315 320 305 Met Met Leu Gly Ile Cys Ala Val Leu 325

<210> 36

<211> 232

<212> PRT

<213> Homo sapiens

<400> 36

 Met
 Leu
 Tyr
 Thr
 Arg
 Lys
 Asn
 Leu
 Thr
 Cys
 Ala
 Gln
 Thr
 Ile
 Asn
 Ser

 1
 5
 5
 8
 10
 10
 15
 15
 15

 Ser
 Ala
 Phe
 Gly
 Asn
 Leu
 Asn
 Val
 Thr
 Lys
 Lys
 Thr
 Thr
 Phe
 Ile
 Val
 Val
 Inc
 Inc

Ala Glu Gly Ala Ser Leu Asp Asp Ile Tyr Met Ile Gly Val Ser Leu 105 100 Gly Ala His Ile Ser Gly Phe Val Gly Glu Met Tyr Asp Gly Trp Leu 125 120 Gly Arg Ile Thr Gly Leu Asp Pro Ala Gly Pro Leu Phe Asn Gly Lys 135 140 Pro His Gln Asp Arg Leu Asp Pro Ser Asp Ala Gln Phe Val Asp Val 155 . 145 150 Ile His Ser Asp Thr Asp Gly Asn Ala Pro Phe Leu Val Ala Leu Gly 170 165 Tyr Lys Glu Pro Leu Gly Asn Ile Asp Phe Tyr Pro Asn Gly Gly Leu 185 180 Asp Gln Pro Gly Cys Pro Lys Thr Ile Leu Gly Gly Asn Val Lys Glu 200 205 Met Ile Gln Ala Ser Tyr Ile Phe Phe Leu Lys Asn Asp Ser Met Asp 215 220 Leu Ser Ser Pro Lys Glu Val Glu 225 230

<210> 37 <211> 452

<212> PRT

<213> Homo sapiens

<400> 37

Ser Val Glu Asp Met Asn Val Val Val Val Asp Trp Asn Arg Gly Ala 100 105 110

Thr	Thr	Leu	Ile	Tyr	Thr	His	Ala	Ser	Ser	Lys	Thr		Lys	Val	Ala
		115					120					125			
Met	Val	Leu	Lys	Glu	Phe		Asp	Gln	Met	Leu	Ala	Glu	Gly	Ala	Ser
	130					135					140				
Leu	Asp	Asp	Ile	Tyr	Met	Ile	Gly	Val	Ser		Gly	Ala	His	Ile	
145					150					155					160
Gly	Phe	Val	Gly	Glu	Met	Tyr	Asp	Gly	Trp	Leu	Gly	Arg	Ile	Thr	Gly
				165					170					175	
Leu	Asp	Pro	Ala	Gly	Pro	Leu	Phe	Asn	Gly	Lys	Pro	His	Gln	Asp	Arg
			180					185					190		
Leu	Asp	Pro	Ser	Asp	Ala	Gln	Phe	Val	Asp	Val	Ile	His	Ser	Asp	Thr
		195					200					205			
Asp	Ala	Leu	Gly	Tyr	Lys	Glu	Pro	Leu	Gly	Asn	Ile	Asp	Phe	Tyr	Pro
	210					215					220				
Asn	Gly	Gly	Leu	Asp	Gln	Pro	Gly	Cys	Pro		Thr	Ile	Leu	Gly	
225					230					235					240
Phe	Gln	Tyr	Phe		Суѕ	Asp	His	Gln		Ser	Val	Tyr	Leu		Leu
				245					250					255	
Ser	Ser	Leu		Glu	Ser	Cys	Thr		Thr	Ala	Tyr	Pro		Asp	Ser
			260					265					270		
Tyr	Gln	Asp	Tyr	Arg	Asn	Gly		Cys	Val	Ser	Cys		Thr	Ser	Gln
		275					280					285			
Lys		Ser	Cys	Pro	Leu		Gly	Tyr	Tyr	Ala		Asn	Trp	Lys	Asp
_	290				_	295	_		_,	_	300	-,	-1	_	m)
	Leu	Arg	Gly	Lys		Pro	Pro	Met	Thr		Ala	Phe	Phe	Asp	
305	~ 1	~ 1	•	_	310		<b>N</b> 4 - 4	m	11.5 -	315	D)	17-1	7	T1-	320
Ala	GLu	Glu	Ser		rne	Cys	мет	Tyr		Tyr	rne	vaı	Asp		тте
m)	m	70	<b>.</b>	325	17- 3	7	7	C3	330	т1-	መኤ፦	Tla	T	335	7\ ~~ ~
Thr	Trp	Asp		ASN	vaı	Arg	Arg		Asp	тте	inr	тте		ьeu	Arg
7\	T	71-	340	7.00	<b>™</b>	ui-	71	345	T	Tla	Tla	802	350	C111	Dro
Asp	гуѕ	Ala	стλ	ASN	ınr	nis	360	ser	гуз	тте	тте	365	HSII	GIU	FIO
ሞኤ∽	Th∽	355 Phe	C1 r	T 176	ጥ፣፣፦	цic		Val	Ser	Len	Leu		Δνα	Phe	Aen
TIIT	370	FIIG	GIII	пуз	тУL	375	OTII	νа⊥	Der	ыcи	380	1114	1119	Line	11011
Gln		Leu	Aen	Luc	Val		Δls	Tle	Ser	T.eu		Phe	Ser	Thr	Glv
385	тэр	neu	r.sp	пуз	390	a	11T CI	-1C	201	395		- 110	501		400
	],e11	Ile	Gly	Pro		Tvr	Lve	Leu	Ara		Leu	Ara	Met	Lvs	
261	ъcи	116	Сту	405	111 9	+ y -	-y3	Lou	410		200	9		415	
Ara	Ser	Leu	Ala		Pro	Glu	Ara	Pro		Leu	Cvs	Ara	Tvr		Leu
an y	201	204	420		0	J_ u	9	425			5,5	9	430		

r .

Val Leu Met Glu Asn Val Glu Thr Val Phe Gln Pro Ile Leu Cys Pro Glu Leu Gln Leu <210> 38 <211> 450 <212> PRT <213> Homo sapiens <400> 38 Met Gly Leu Arg Ser His His Leu Ser Leu Gly Leu Leu Leu Phe Leu Leu Pro Ala Glu Cys Leu Gly Ala Glu Gly Arg Leu Ala Leu Lys Leu Phe Arg Asp Leu Phe Ala Asn Tyr Thr Ser Ala Leu Arg Pro Val Ala Asp Thr Asp Gln Thr Leu Asn Val Thr Leu Glu Val Thr Leu Ser Gln Ile Ile Asp Met Asp Glu Arg Asn Gln Val Leu Thr Leu Tyr Leu Trp Ile Arg Gln Glu Trp Thr Asp Ala Tyr Leu Arg Trp Asp Pro Asn Ala Tyr Gly Gly Leu Asp Ala Ile Arg Ile Pro Ser Ser Leu Val Trp Arg Pro Asp Ile Val Leu Tyr Asn Lys Ala Asp Ala Gln Pro Pro Gly Ser Ala Ser Thr Asn Val Val Leu Arg His Asp Gly Ala Val Arg Trp Asp Ala Pro Ala Ile Thr Arg Ser Ser Cys Arg Val Asp Val Ala Ala Phe Pro Phe Asp Ala Gln His Cys Gly Leu Thr Phe Gly Ser Trp Thr His Gly Gly His Gln Leu Asp Val Arg Pro Arg Gly Ala Ala Ala Ser Leu Ala Asp Phe Val Glu Asn Val Glu Trp Arg Val Leu Gly Met Pro 

Ala Arg Arg Arg Val Leu Thr Tyr Gly Cys Cys Ser Glu Pro Tyr Pro

```
Asp Val Thr Phe Thr Leu Leu Leu Arg Arg Ala Ala Ala Tyr Val
225
                    230
                                        235
Cys Asn Leu Leu Pro Cys Val Leu Ile Ser Leu Leu Ala Pro Leu
               245
                                    250
Ala Phe His Leu Pro Ala Asp Ser Gly Glu Lys Val Ser Leu Gly Val
                                265
         . 260
Thr Val Leu Leu Ala Leu Thr Val Phe Gln Leu Leu Ala Glu Ser
        275
                            280
Met Pro Pro Ala Glu Ser Val Pro Leu Ile Gly Lys Tyr Tyr Met Ala
                        295
Thr Met Thr Met Val Thr Phe Ser Thr Ala Leu Thr Ile Leu Ile Met
305
                                        315
                    310
Asn Leu His Tyr Cys Gly Pro Ser Val Arg Pro Val Pro Ala Trp Ala
                325
                                    330
Arg Ala Leu Leu Gly His Leu Ala Arg Gly Leu Cys Val Arg Glu
            340
                                345
Arg Gly Glu Pro Cys Gly Gln Ser Arg Pro Pro Glu Leu Ser Pro Ser
                                                365
Pro Gln Ser Pro Glu Gly Gly Ala Gly Pro Pro Ala Gly Pro Cys His
                        375
Glu Pro Arg Cys Leu Cys Arg Gln Glu Ala Leu Leu His His Val Ala
385
                    390
                                        395
Thr Ile Ala Asn Thr Phe Arg Ser His Arg Ala Ala Gln Arg Cys His
                405
                                    410
Glu Asp Trp Lys Arg Leu Ala Arg Val Met Asp Arg Phe Phe Leu Ala
            420
                                425
                                                    430
Ile Phe Phe Ser Met Ala Leu Val Met Ser Leu Leu Val Leu Val Gln
                                                445
        435
                            440
Ala Leu
   450
<210> 39
<211> 255
```

<400> 39

<212> PRT

<213> Homo sapiens

Met Val Lys Gly Glu Lys Gly Pro Lys Gly Lys Lys Ile Thr Leu Lys

1 5 10 15

```
Val Ala Arg Asn Cys Ile Lys Ile Thr Phe Asp Gly Lys Lys Arg Leu
                                  25
             2.0
 Asp Leu Ser Lys Met Gly Ile Thr Thr Phe Pro Lys Cys Ile Leu Arg
                              40
 Leu Ser Asp Met Asp Glu Leu Asp Leu Ser Arg Asn Leu Ile Arg Lys
                          55
 Ile Pro Asp Ser Ile Ser Lys Phe Gln Asn Leu Arg Trp Leu Asp Leu
                                          75
 65
 His Ser Asn Tyr Ile Asp Lys Leu Pro Glu Ser Ile Gly Gln Met Thr
                                      90
 Ser Leu Leu Tyr Leu Asn Val Ser Asn Asn Arg Leu Thr Ser Asn Gly
                                  105
             100
- Leu Pro Val Glu Leu Lys Gln Leu Lys Asn Ile Arg Ala Val Asn Leu
                                                  125
                              120
         115
 Gly Leu Asn His Leu Asp Ser Val Pro Thr Thr Leu Gly Ala Leu Lys
                          135
 Glu Leu His Glu Val Gly Leu His Asp Asn Leu Leu Asn Asn Ile Pro
                                          155
                      150
 145
 Val Ser Ile Ser Lys Leu Pro Lys Leu Lys Lys Leu Asn Ile Lys Arg
                                      170
 Asn Pro Phe Pro Lys Pro Gly Glu Ser Glu Ile Phe Ile Asp Ser Ile
                                  185
              180
  Arg Arg Leu Glu Asn Leu Tyr Val Val Glu Glu Lys Asp Leu Cys Ala
                                                   205
                              200
  Ala Cys Leu Arg Lys Cys Gln Asn Ala Arg Asp Asn Leu Asn Arg Ile
                          215
  Lys Asn Met Ala Thr Thr Pro Arg Lys Thr Ile Phe Pro Asn Leu
                                                               240
                                          235
                      230
  225
  Ile Ser Pro Asn Ser Met Ala Lys Asp Ser Trp Glu Asp Trp Arg
                                                           255
                                      250
                  245
```

<210> 40

<211> 214

<212> PRT

<213> Homo sapiens

<400> 40

Met Gln Ala Gly Thr Gln Ser Thr His Glu Ser Leu Lys Pro Gln Arg

1 5 10 15

```
Val Gln Phe Gln Ser Arg Asn Phe His Asn Ile Leu Gln Trp Gln Pro
                                25
            20
Gly Arg Ala Leu Thr Gly Asn Ser Ser Val Tyr Phe Val Gln Tyr Lys
                            40
Ile Tyr Gly Gln Arg Gln Trp Lys Asn Lys Glu Asp Cys Trp Gly Thr
                        55
Gln Glu Leu Ser Cys Asp Leu Thr Ser Glu Thr Ser Asp Ile Gln Glu
                    70
                                                             80
65
Pro Tyr Tyr Gly Arg Val Arg Ala Ala Ser Ala Gly Ser Tyr Ser Glu
Trp Ser Met Thr Pro Arg Phe Thr Pro Trp Glu Thr Lys Ile Asp
                                105
                                                    110
            100
Pro Pro Val Met Asn Ile Thr Gln Val Asn Gly Ser Leu Leu Val Ile
                            120
                                                125
        115
Leu His Ala Pro Asn Leu Pro Tyr Arg Tyr Gln Lys Glu Lys Asn Val
                        135
                                            140
Ser Ile Glu Asp Tyr Tyr Glu Leu Leu Tyr Arg Val Phe Ile Ile Asn
                    150
                                        155
                                                             160
145
Asn Ser Leu Glu Lys Glu Gln Lys Val Tyr Glu Gly Ala His Arg Ala
                                    170
Val Glu Ile Glu Ala Leu Thr Pro His Ser Ser Tyr Cys Val Val Ala
                                                     190
            180
                                185
Glu Ile Tyr Gln Pro Met Leu Asp Arg Arg Ser Gln Arg Ser Glu Glu
                            200
                                                 205
       195
Arg Cys Val Glu Ile Pro
    210
```

<210> 41

<211> 231

<212> PRT

<213> Homo sapiens

### <400> 41

Met Met Pro Lys His Cys Phe Leu Gly Phe Leu Ile Ser Phe Phe Leu 1 5 5 10 15

Thr Gly Val Ala Gly Thr Gln Ser Thr His Glu Ser Leu Lys Pro Gln 20 25 30

Arg Val Gln Phe Gln Ser Arg Asn Phe His Asn Ile Leu Gln Trp Gln 35 40 45

```
Pro Gly Arg Ala Leu Thr Gly Asn Ser Ser Val Tyr Phe Val Gln Tyr
                        55
Lys Ile Tyr Gly Gln Arg Gln Trp Lys Asn Lys Glu Asp Cys Trp Gly
                    70
                                        75
Thr Gln Glu Leu Ser Cys Asp Leu Thr Ser Glu Thr Ser Asp Ile Gln
                85
                                     90
Glu Pro Tyr Tyr Gly Arg Val Arg Ala Ala Ser Ala Gly Ser Tyr Ser
                                                     110
            100
                                105
Glu Trp Ser Met Thr Pro Arg Phe Thr Pro Trp Trp Glu Thr Lys Ile
                                                 125
                            120
        115
Asp Pro Pro Val Met Asn Ile Thr Gln Val Asn Gly Ser Leu Leu Val
                        135
    130
Ile Leu His Ala Pro Asn Leu Pro Tyr Arg Tyr Gln Lys Glu Lys Asn
                                         155
                    150
Val Ser Ile Glu Asp Tyr Tyr Glu Leu Leu Tyr Arg Val Phe Ile Ile
                                     170
                165
Asn Asn Ser Leu Glu Lys Glu Gln Lys Val Tyr Glu Gly Ala His Arg
                                 185
            180
Ala Val Glu Ile Glu Ala Leu Thr Pro His Ser Ser Tyr Cys Val Val
                                                 205
                             200
Ala Glu Ile Tyr Gln Pro Met Leu Asp Arg Arg Ser Gln Arg Ser Glu
                                             220
                         215
    210
Glu Arg Cys Val Glu Ile Pro
                     230
```

<210> 42 <211> 263 <212> PRT <213> Homo sapiens

<400> 42

Lys Ile Met Phe Ser Cys Ser Met Lys Ser Ser His Gln Lys Pro Ser 70 75 Gly Cys Trp Gln His Ile Ser Cys Asn Phe Pro Gly Cys Arg Thr Leu 90 Ala Lys Tyr Gly Gln Arg Gln Trp Lys Asn Lys Glu Asp Cys Trp Gly 105 Thr Gln Glu Leu Ser Cys Asp Leu Thr Ser Glu Thr Ser Asp Ile Gln 125 120 Glu Pro Tyr Tyr Gly Arg Val Arg Ala Ala Ser Ala Gly Ser Tyr Ser 135 Glu Trp Ser Met Thr Pro Arg Phe Thr Pro Trp Trp Glu Thr Lys Ile 150 155 Asp Pro Pro Val Met Asn Ile Thr Gln Val Asn Gly Ser Leu Leu Val 170 165 Ile Leu His Ala Pro Asn Leu Pro Tyr Arg Tyr Gln Lys Glu Lys Asn 180 185 Val Ser Ile Glu Asp Tyr Tyr Glu Leu Leu Tyr Arg Val Phe Ile Ile 200 205 195 Asn Asn Ser Leu Glu Lys Glu Gln Lys Val Tyr Glu Gly Ala His Arg 215 Ala Val Glu Ile Glu Ala Leu Thr Pro His Ser Ser Tyr Cys Val Val 235 225 230 Ala Glu Ile Tyr Gln Pro Met Leu Asp Arg Arg Ser Gln Arg Ser Glu 250 245 Glu Arg Cys Val Glu Ile Pro 260

<210> 43

<211> 259

<212> PRT

<213> Homo sapiens

<400> 43

Met Tyr Val Leu Ser Pro Val Glu Phe Ile Ile Leu Gln Leu Leu Phe 1 Ile Gln Ala Ile Ser Ser Ser Leu Lys Gly Phe Leu Ser Ala Met Arg 20 Leu Ala His Arg Gly Cys Asn Val Asp Thr Pro Val Ser Thr Leu Thr 35

Pro Val Lys Thr Ser Glu Phe Glu Asn Phe Lys Thr Lys Met Val Ile 55 Thr Ser Lys Lys Asp Tyr Pro Leu Ser Lys Asn Phe Pro Tyr Ser Leu 75 70 Glu His Leu Gln Thr Ser Tyr Cys Gly Leu Val Arg Val Asp Met Arg 90 85 Met Leu Cys Leu Lys Ser Leu Arg Lys Leu Asp Leu Ser His Asn His 105 Ile Lys Lys Leu Pro Ala Thr Ile Gly Asp Leu Ile His Leu Gln Glu 120 Leu Asn Leu Asn Asp Asn His Leu Glu Ser Phe Ser Val Ala Leu Cys 140 135 His Ser Thr Leu Gln Lys Ser Leu Arg Ser Leu Asp Leu Ser Lys Asn 155 150 Lys Ile Lys Ala Leu Pro Val Gln Phe Cys Gln Leu Gln Glu Leu Lys 165 170 Asn Leu Lys Leu Asp Asp Asn Glu Leu Ile Gln Phe Pro Cys Lys Ile 190 180 185 Gly Gln Leu Ile Asn Leu Arg Phe Leu Ser Ala Ala Arg Asn Lys Leu 200 Pro Phe Leu Pro Ser Glu Phe Arg Asn Leu Ser Leu Glu Tyr Leu Asp 215 Leu Phe Gly Asn Thr Phe Glu Gln Pro Lys Val Leu Pro Val Ile Lys 235 230 Leu Gln Ala Pro Leu Thr Leu Leu Glu Ser Ser Ala Arg Thr Ile Leu 255 250 245 His Asn Arg

<210> 44

<211> 416

<212> PRT

<213> Homo sapiens

<400> 44

Met Lys Leu His Cys Glu Val Glu Val Ile Ser Arg His Leu Pro Ala 1 5 5 10 10 15 Leu Gly Leu Arg Asn Arg Gly Lys Gly Val Arg Ala Val Leu Ser Leu 20 25 30

Cys	Gln	Gln 35	Thr	Ser	Arg	Ser	Gln 40	Pro	Pro	Val	Arg	Ala 45	Phe	Leu	Leu
Ile	Ser 50	Thr	Leu	Lys	Asp	Lys 55	Arg	Gly	Thr	Arg	Tyr 60	Glu	Leu	Arg	Glu
Asn 65	Ile	Glu	Gln	Phe	Phe 70	Thr	Lys	Phe	Val	Asp 75	Glu	Gly	Lys	Ala	Thr 80
Val	Arg	Leu	Lys	Glu 85	Pro	Pro	Val	Asp	Ile 90	Cys	Leu	Ser	Lys	Ala 95	Ile
Ser	Ser	Ser	Leu 100	Lys	Gly	Phe	Leu	Ser 105	Ala	Met	Arg	Leu	Ala 110	His	Arg
Gly	Cys	Asn 115	Val	Asp	Thr	Pro	Val 120	Ser	Thr	Leu	Thr	Pro 125	Val	Lys	Thr
Ser	Glu 130	Phe	Glu	Asn	Phe	Lys 135	Thr	Lys	Met	Val	Ile 140	Thr	Ser	Lys	Lys
Asp 145	Tyr	Pro	Leu	Ser	Lys 150	Asn	Phe	Pro	Tyr	Ser 155	Leu	Glu	His	Leu	Gln 160
Thr	Ser	Tyr	Cys	Gly 165	Leu	Val	Arg	Val	Asp 170	Met	Arg	Met	Leu	Cys 175	Leu
Lys	Ser	Leu	Arg 180	Lys	Leu	Asp	Leu	Ser 185	His	Asn	His	Ile	Lys 190	Lys	Leu
Pro	Ala	Thr 195	Ile	Gly	Asp	Leu	Ile 200	His	Leu	Gln	Glu	Leu 205	Asn	Leu	Asn
Asp	Asn 210	His	Leu	Glu	Ser	Phe 215	Ser	Val	Ala	Leu	Cys 220	His	Ser	Thr	Leu
Gln 225	Lys	Ser	Leu	Arg	Ser 230	Leu	Asp	Leu	Ser	Lys 235	Asn	Lys	Ile	Lys	Ala 240
Leu	Pro	Val	Gln	Phe	Cys	Gln	Leu	Gln	Glu 250	Leu	Lys	Asn	Leu	Lys 255	Leu
Asp	Asp	Asn	Glu 260	Leu	Ile	Gln	Phe	Pro 265	Cys	Lys	Ile	Gly	Gln 270	Leu	Ile
Asn	Leu	Arg 275	Phe	Leu	Ser	Ala	Ala 280	Arg	Asn	Lys	Leu	Pro 285	Phe	Leu	Pro
Ser	Glu 290	Phe	Arg	Asn	Leu	Ser 295	Leu	Glu	Tyr	Leu	Asp 300	Leu	Phe	Gly	Asn
Thr 305	Phe	Glu	Gln	Pro	Lys 310	Val	Leu	Pro	Val	Ile 315	Lys	Leu	Gln	Ala	Pro 320
	Thr	Leu	Leu	Glu 325	Ser	Ser	Ala	Arg	Thr 330	Ile	Leu	His	Asn	Arg 335	Asn
Arg	Ile	Pro	Tyr 340		Ser	His	Ile	Ile 345	Pro	Phe	His	Leu	Cys 350	Gln	Asp

 Leu
 Asp
 Thr
 Ala
 Lys
 Ile
 Cys
 Val
 Cys
 Gly
 Arg
 Phe
 Cys
 Leu
 Asn
 Ser

 Phe
 Ile
 Gln
 Gly
 Thr
 Thr
 Met
 Asn
 Leu
 His
 Ser
 Val
 Ala
 His
 Thr

 370
 Ile
 Ile
 Asn
 Leu
 Gly
 Gly
 Thr
 Glu
 Ala
 Pro
 Ile
 Ile
 Ser

 385
 Ile
 Ile
 Gly
 Cys
 Tyr
 Val
 Asn
 Ser
 Asp
 Met
 Leu
 Lys

 400
 Ile
 I

<210> 45 <211> 990 <212> DNA <213> Mus musculus

#### <400> 45

atggtggtca gggccttcgt tttgctggcc ctctttgcag aagcctcagc gaaatcatgc 60 actocquata aaqcaqatgt catcottgtg ttttgttatc ccaagaccat catcactaaa 120 atccccgagt gtccctatgg atgggaagta caccagctgg cactcggggg gctgtgttac 180 aacggggtcc atgaaggtgg ctattaccag tttgtcatcc ctgatctgtc acctaagaac 240 aagteetaet geggaaceea gteagagtae aageeeeea tetaceaett etacageeae 300 atcgtgtcca acgacagcac agtgatcgtg aagaaccagc ccgtcaacta ctccttctcc 360 tgcacctacc actccaccta cttggtgaac caggctgctt ttgaccagag agtggccact 420 gttcacgtca agaacgggag catgggcaca tttgaaagcc agttgtccct caacttctac 480 actaatqcca aqttttccac caaaaaaqaa gctcccttcg ttctggaaac gtccgaaatc 540 qqctcaqatc tqtttqcqqq aqtaqaagcc aaaggcctaa gcgttcggtt caaagtggtc 600 ttgaataget getgggeeae eeectegget gaetteatgt acceettaea gtggeagete 660 atcaataagg gctgccccac cgatgagaca gtcctcgtgc atgagaacgg caaagaccac 720 agggccactt tccaattcaa tgccttccgg ttccagaaca tccccaaact ttccaaggtt 780 tgqttacact gtgagacgtt catctgcgac agtgagaagc tctcctgccc cgtgaactgt 840 gacaaacgga agcgcatgct acgtgaccag acaggaggtg tcctggttgt ggagttgtcc 900 ctgaggagca gggcattttc cggcctctgt gacttctcag atgttcttct tcacctcatc 960 990 ctgatgctgg ggacctgggc tgtgttgtag

<210> 46 <211> 329 <212> PRT <213> Mus musculus

<400> 46

Met	Val	Val	Arg	Ala	Phe	Val	Leu	Leu	Ala	Leu	Phe	Ala	Glu		Ser
1				5					10					15	_
Ala	Lys	Ser	Cys	Thr	Pro	Asn	Lys		Asp	Val	Ile	Leu		Phe	Cys
			20					25				_	30		_
Tyr	Pro	Lys	Thr	Ile	Ile	Thr		Ile	Pro	Glu	Cys		Tyr	GLY	Trp
		35					40				_ ^	45	~ 1		***
Glu	Val 50	His	Gln	Leu	Ala	Leu 55	Gly	Gly	Leu	Cys	Tyr 60	Asn	GIÀ	Val	HIS
Glu	Gly	Gly	Tyr	Tyr	Gln	Phe	Val	Ile	Pro	Asp	Leu	Ser	Pro	Lys	Asn
65					70					75					80
Lys	Ser	Tyr	Cys	Gly 85	Thr	Gln	Ser	Glu	Tyr 90	Lys	Pro	Pro	Ile	Tyr 95	His
Phe	Tvr	Ser	His		Val	Ser	Asn	Asp	Ser	Thr	Val	Ile	Val	Lys	Asn
			100					105					110		
Gln	Pro	Val	Asn	Tyr	Ser	Phe	Ser	Cys	Thr	Tyr	His	Ser	Thr	Tyr	Leu
		115					120					125			
Val	Asn	Gln	Ala	Ala	Phe	Asp	Gln	Arg	Val	Ala	Thr	Val	His	Val	Lys
	130					135					140				
Asn	Gly	Ser	Met	Gly	Thr	Phe	Glu	Ser	Gln	Leu	Ser	Leu	Asn	Phe	Tyr
145	_				150					155					160
	Asn	Ala	Lys	Phe	Ser	Thr	Lys	Lys	Glu	Ala	Pro	Phe	Val	Leu	Glu
				165					170					175	
Thr	Ser	Glu	Ile	Gly	Ser	Asp	Leu	Phe	Ala	Gly	Val	Glu	Ala	Lys	Gly
			180					185					190		
Leu	Ser	Val	Arg	Phe	Lys	Val	Val	. Leu	Asn	Ser	Cys	Trp	Ala	Thr	Pro
		195					200					205			
Ser	Ala	Asp	Phe	Met	Tyr	Pro	Let	Gln	Trp	Gln	Leu	Ile	Asn	Lys	Gly
	210					215	•				220				
Cys	Pro	Thr	Asp	Glu	Thr	. Val	. Lev	ı Val	. His	Glu	ı Asn	Gly	Lys	Asp	His
225					230					235					240
Arg	Ala	Thr	Phe	Gln	Phe	a Asr	n Ala	a Phe			e Gln	Asr	ı Ile		Lys
				245					250					255	
Leu	Ser	Lys	s Val	Trp	Let	ı His	з Суз	s Glu	ı Thr	Phe	e Ile	Cys			Glu
			260					265					270		
Lys	Leu	Ser	c Cys	s Pro	val	L Asr	су:	s Asp	b Lys	s Arq	g Lys			Leu	a Arg
		275					280					285			
Asp	Glr	Thi	c Gly	y Gly	/ Val	l Le	ע Va	l Vai	l Glu	ı Leı	ı Sei	. Le	ı Ar	g Ser	Arg
	290					29					300				. =
Ala	a Phe	e Sei	r Gly	y Lei	д Су:	s Ası	p Ph	e Se	r Asp	o Va	l Le	ي Leı	Hi:	s Lei	ı Ile
305	5				31	0				31	5				320

Leu Met Leu Gly Thr Trp Ala Val Leu 325